JUNE • 1959

# American Vegetable Grower

## and MARKET GROWERS JOURNAL

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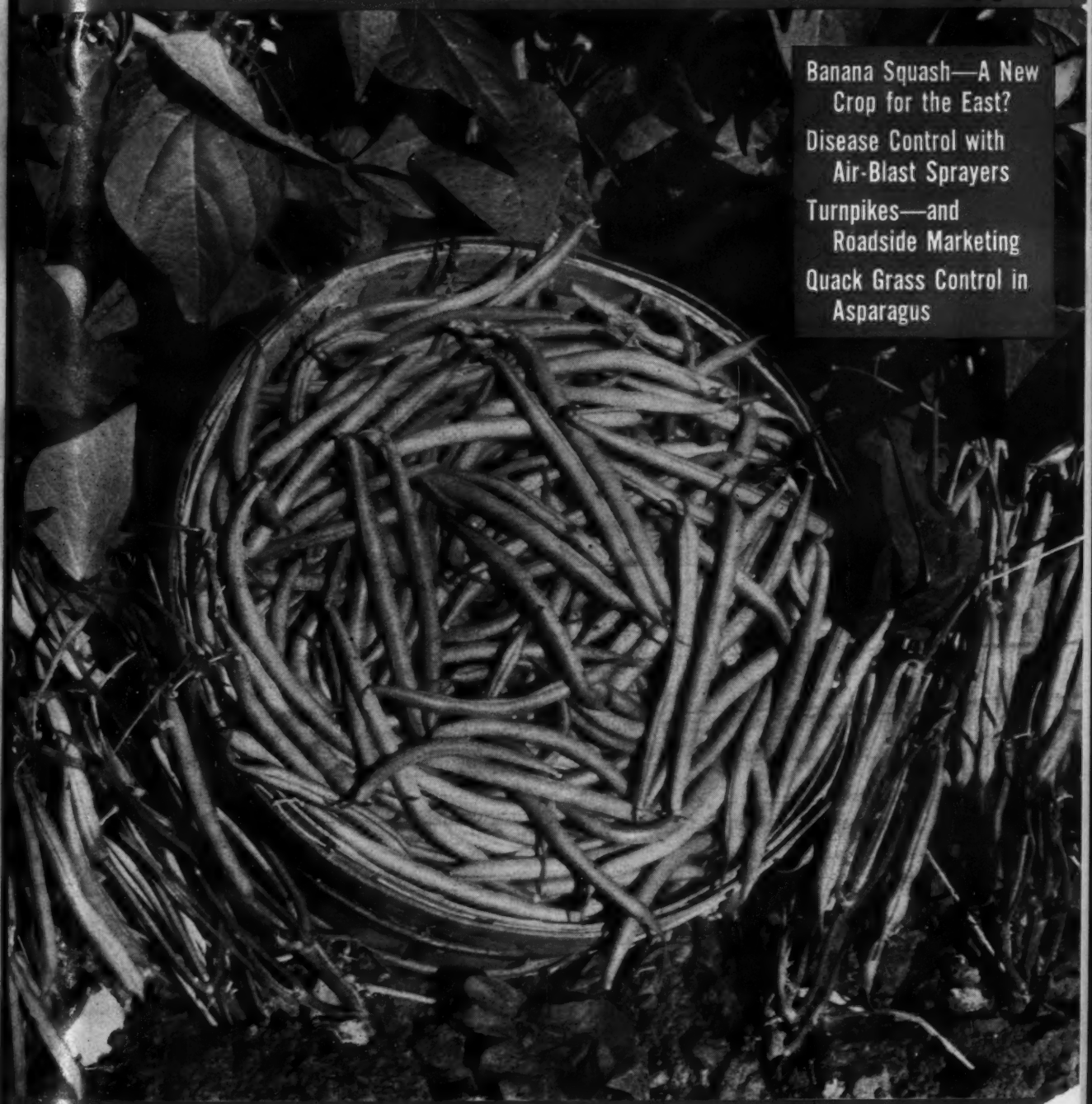

Banana Squash—A New Crop for the East?

Disease Control with Air-Blast Sprayers

Turnpikes—and Roadside Marketing

Quack Grass Control in Asparagus

**Northeastern Growers Irrigate to Get Top Yields**

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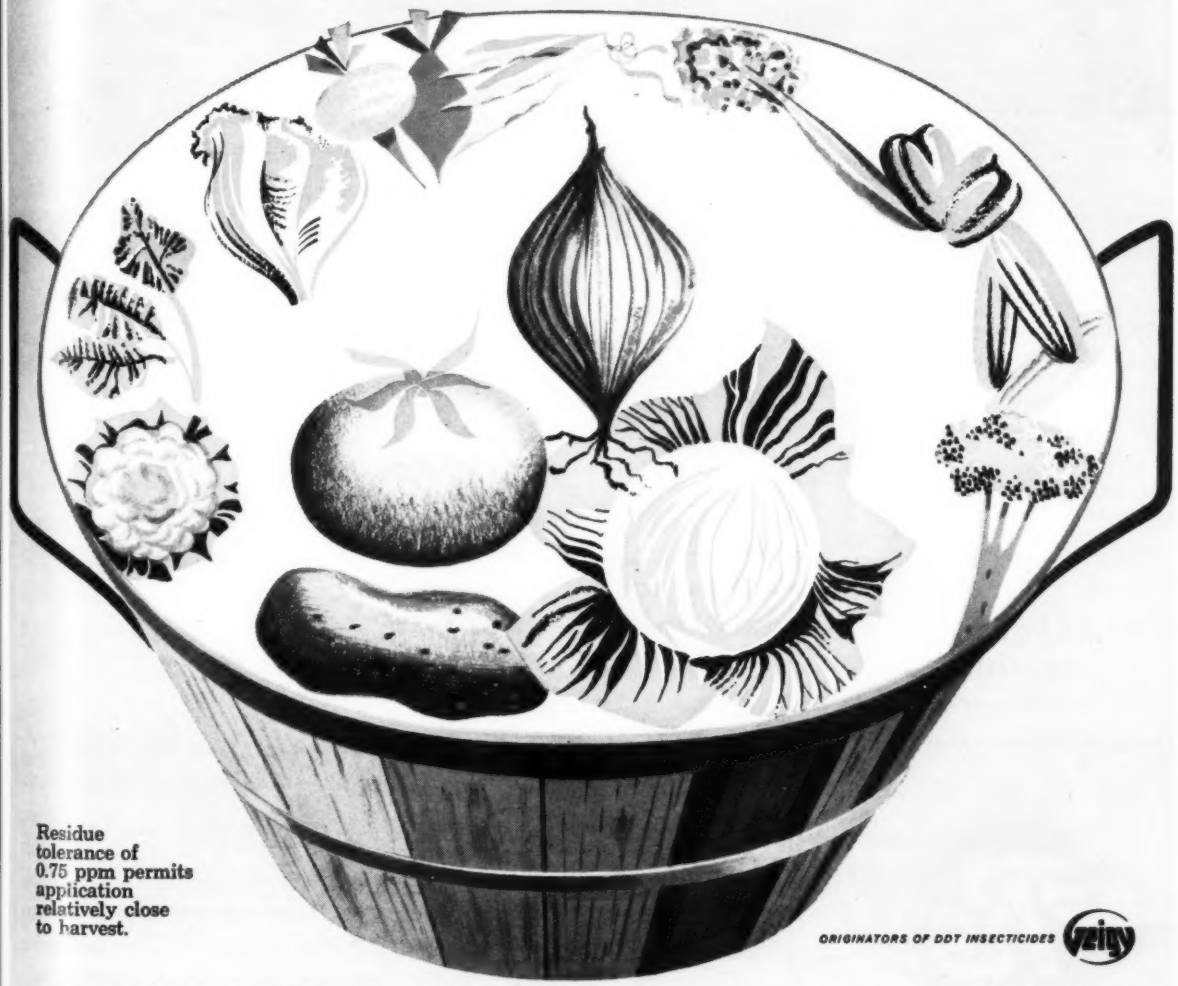

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# American Vegetable Grower

Reg. U.S. Pat. Off.
Commercial Vegetable Grower
Market Growers Journal

**VOL. 7 No. 6**

**JUNE, 1959**

*Cover photograph shows Tendercrop, new slender-podded, mosaic resistant snap bean developed by USDA; well adapted for processing.*

## FEATURES


Disease Control Using Air-Blast Sprayers ..... 9
*By J. D. Wilson and Frank Irons*

These Growers Irrigate to Get Top Yields ..... 10
*By M. T. Vittum*

He Retails His Vegetables ..... 12
*By Herb Lee*

Government and Union Take Aim at Farm Labor ..... 26
*By Matt Triggs*

**Asparagus**
Quack Grass Control ..... 22
*By W. A. Shane*

**Greenhouse Crops**
Better Understanding ..... 34
*By Fred K. Buscher*

**Marketing**
The Turnpike Age ..... 23
*By Robert L. Bull*

**Peas & Beans**
Growers Face Challenge ..... 16
*By W. N. Ritz*

**Potatoes**
Success with Thimet ..... 35
Irrigating for Profit ..... 35

**Sweet Corn**
Vacuum Cooling ..... 33

**Tomatoes**
Fertilizer under Seed ..... 20
*By John P. Underhill*

**Vine Crops**
Banana Squash ..... 18
Bred for Flavor ..... 18


## DEPARTMENTS


Letters to the Editor ..... 6
State News ..... 13
Know Your Vegetable Seeds ..... 13
Answering Your Questions ..... 30
As It Looks to Me ..... 32
NJVGA Page ..... 36
Calendar of Coming Events ..... 39
New for You ..... 42
Editorials ..... 46
Quote-of-the-Month ..... 46



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## about controlling blight with

# DITHANE M-22*

**"... 30 barrels more per acre."**

We tried DITHANE® M-22 on about 10 acres of potatoes during 1958 with very satisfying results. During August, about 9 inches of rain fell, and late blight became a serious threat to Aroostook County potato crop. We feel that DITHANE M-22 passed a severe test by giving us better blight control than we had with the nabam fungicide used on the balance of the crop. In addition to the excellent disease control, we had an increase in yield amounting to 30 barrels per acre.

**Alfred J. Lausier,** KVL FARMS, PRESQUE ISLE, MAINE

**"... exceptional control of late blight."**

I used DITHANE M-22 on my entire crop of certified seed potatoes during the 1958 season and I feel that the performance of the product was outstanding. During the month of August, we had an excessive amount of rain in Aroostook County and late blight rapidly developed in the area. Despite these severe disease conditions, DITHANE M-22 prevented any late blight development in my crop. Under the circumstances, I feel that DITHANE M-22 gave me exceptional control of late blight.

**Athell Banks,** MARS HILL, MAINE

**"... prefer working with DITHANE M-22."**

DITHANE M-22 helped us grow a good clean crop of potatoes last season. Weather conditions during 1958 were very favorable for blight and it was present in the county, but DITHANE M-22 kept our vines clean until harvest. We would also prefer working with DITHANE M-22 to other materials. It is convenient to handle and mixes readily.

**J. A. Jones & Son,** R. D. #1, BATH, PA.

**"... plan to continue using DITHANE M-22."**

Since I grow, buy, and sell potatoes and also sell pesticides, I am in a good position to judge fungicides. My opinion is that DITHANE M-22 does an outstanding job of controlling blight on potatoes. I plan to continue using DITHANE M-22 and will recommend it to all my potato-growing customers.

**Jack C. Nichols,** MARKY'S WHOLESALE POTATOES, INC., ELBA, N.Y.

The reports are the same from all over the country —outstanding potato blight control . . . better yields . . . ease of handling and mixing . . . and definite plans to use DITHANE M-22 on a larger scale this season. If you haven't yet discovered the proved advantages of this improved maneb fungicide, check with your Rohm & Haas fieldman or your pesticide dealer before another day goes by. You'll like the results.

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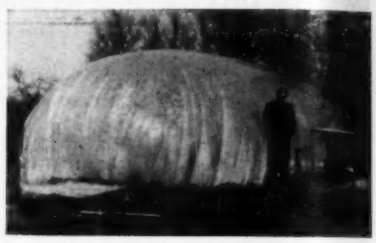
# LETTERS
## TO THE EDITOR

### *Air Supported House*

Dear Editor:

Pictured is one of three air-supported plastic houses I erected this spring and planted to tomatoes. Plastic 32x100 feet long made a house 15x85 feet and 10 feet high at center. Other houses were joined to this one by plastic tunnels.



No heat is required in these houses after April 1 when using wickets and row covers at night.

Light transmission in these houses appears better than in wood frame houses due to less condensation on the single layer of plastic. Air movement over plants will probably accomplish pollination.

Heat build-up is a problem. I plan to try evaporative cooling. Air change once every two minutes maintains about a 10-degree differential over outside temperature.

Versailles, Ky. J. M. Garrett

### *400-Pound Squash*

Dear Editor:

The March issue had a letter from Mr. Coon of Idaho about big squashes. His California Banana is about as large as this variety gets, although some years ago I saw a couple of these which weighed more than 150 pounds.

The heaviest growing variety that I have seen in nearly 50 years of growing and showing and judging many fairs, is the Hungarian Mammoth, brought to America six years ago. I saw one of these which weighed 215 pounds. It took four men and a horse blanket to handle it. Two of this variety, at fairs I judged last fall, ran 170 pounds each. In Hungary they are reported to grow to 400 pounds.

Several years ago Charles Burdette of Oregon grew 10 squashes which weighed 1885 pounds, one of which was over 200 and a couple a little under that figure.

At the San Francisco world's fair over 40 years ago, a squash from a foreign country was said to weigh 400 pounds. It stood as high as a picket fence.

The record weight for a watermelon to my knowledge is 195 pounds.

Coshocton, Ohio Jay Lawrence

### *Spudnik Machine*

Dear Editor:

Evidently your magazine gets around to quite a few of the vegetable growers. The day the February issue came out, Albert J. Longhurst, Blackfoot, Idaho, got a call from a man in Minnesota in regard to his spudnik machine (*From Rags to Riches*, February, 1959 AMERICAN VEGETABLE GROWER, p. 18), and he is now delivering two machines to Minnesota.

Blackfoot, Idaho Milton B. Weston

Royal Packing Company, Phoenix, Arizona, switched to M/R corrugated boxes—cut the costs of packing and shipping green onions.

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# WHEN WET! It's *M/R*© moisture-resistant corrugated developed by H&D

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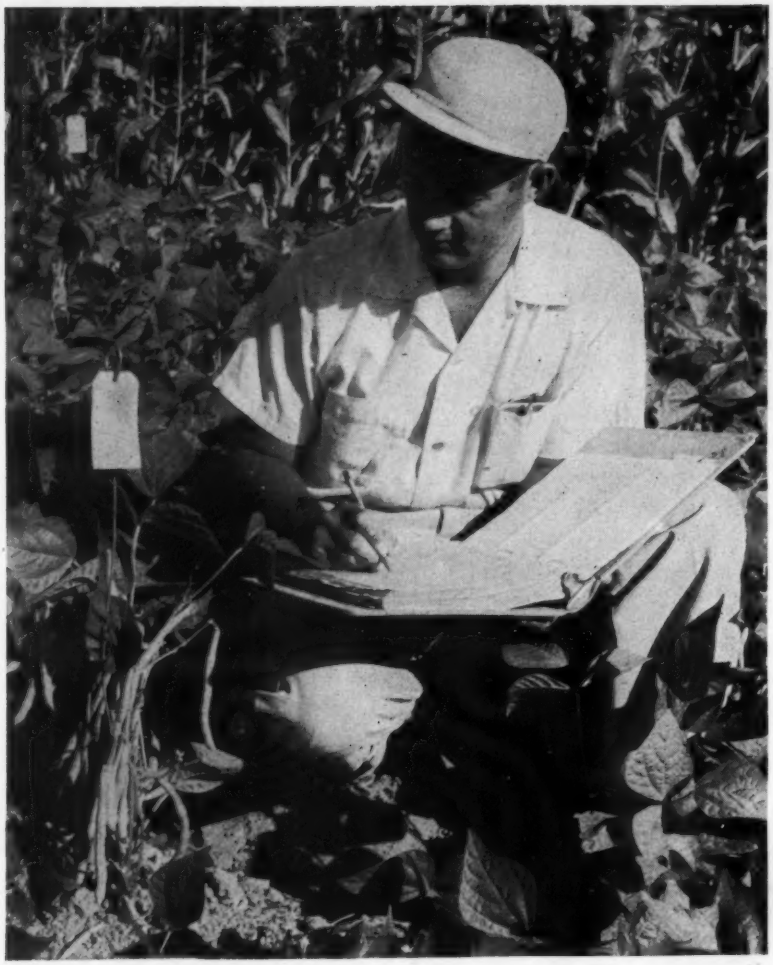

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By J.
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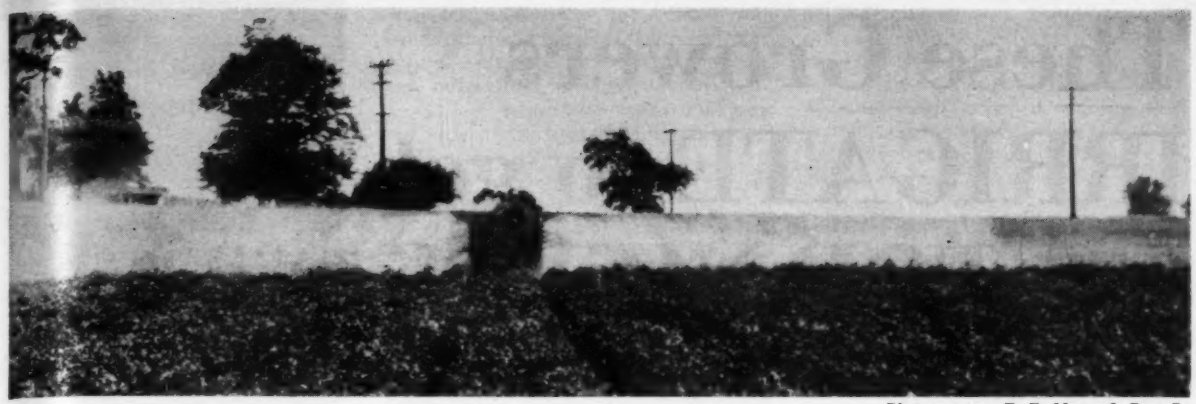


*Photo courtesy F. E. Myers & Bro. Co.*

# DISEASE CONTROL Using Air-Blast Sprayers

By J. D. WILSON and FRANK IRONS

**Performance of air-blast sprayers studied in series of row crop experiments in Ohio**

**Some of the most interesting work with air-blast sprayers has been done in Ohio. In this article Dr. J. D. Wilson, professor of plant pathology at Ohio Agricultural Experiment Station, Wooster, and Frank Irons, principal agricultural engineer in the Agricultural Engineering Research Division of USDA, ARS, Toledo, Ohio, tell about the results of their "1 in 100" experiment.—Ed.**

A SERIES of experiments has been conducted in Ohio to study the performance of air-blast (mist) sprayers in the control of some of the diseases of row crops, particularly the foliage and fruit diseases of tomatoes. The disease-control studies have been supplemented in several instances by determinations of the quantity of fungicide deposited on the different rows of the spray swath, of whatever width that happened to be in a particular experiment.

During the 10 or more years included in this type of experimentation, several different machines, most of them of experimental design, but some of commercial types, have been used. Also, swaths of different widths have been utilized, as have spray formulations of different concentrations, as well as variations in rates of water use (gallonage) and in pump pressure.

It is common experience in conducting experiments of this type that a considerable percentage of the trials fail to yield conclusive results, chiefly because of a low incidence of the disease for which the plants are being sprayed. However, several of these "air-blast" experiments have given worthwhile results, and this was especially true of one conducted on tomatoes on the Northwest Test Farm of Ohio Agricultural Experiment Station during the summer of 1958 where late blight was present in epidemic form.

The sprayer used in this instance was of experimental design capable of delivering 24,000 cubic feet of air per minute at a maximum outlet velocity of 90 to 100 miles per hour. However, the air pattern was distributed so that velocity at the plants was low enough to avoid any damage. The outlet was designed to deliver the air and spray pattern to one side only, including the row straddled by the machine.

An "up and back" swath of 12 tomato rows, planted 6 feet apart (a total width of 72 feet), was selected for use in this instance. Maneb was applied at 3 pounds per acre with an average spray interval of eight days, beginning on July 18 and ending on September 18.

In three of the treatments, spray formulations of 16x, 8x, and 4x concentration were applied at 10, 20, and 40 gallons per acre, respectively, at a pump pressure of 60 pounds per square inch. A second pump pressure of 300 psi was included at the 40-gallon rate. Two check treatments were used, one untreated and another in which 160 gallons of spray mixture (X concentration) was applied with a fixed-boom hydraulic sprayer, operated at 300 psi.

The epidemic occurrence of late blight on the farm afforded a long-sought opportunity to observe the performance of a row-crop air-blast sprayer against this most feared and most difficult-to-control foliage disease of tomato. Also, anthracnose fruit rot, another disease of this crop which is of annual concern to the Ohio grower and canner alike, was comparatively severe in this experiment, and this afforded an additional opportunity to compare air-blast and fixed-boom applications in the control of another economically important disease. In other words, this was a "1 in 100" experiment among those designed to study the performance of an air-blast sprayer under weather and

(*Continued on page* 40)

# These Growers IRRIGATE to get TOP YIELDS

**Growers in New York and the Northeast also report improved quality and other benefits from irrigation**

*Photo courtesy H. G. Humphrey*
**Checking soil moisture in irrigated test field.**

By M. T. VITTUM
*New York Agricultural Experiment Station, Geneva*

IRRIGATION has long been used by some vegetable growers in New York state, but prior to World War II most of it was located on the light, sandy potato soils of Long Island and on small market garden areas in Hudson Valley and upstate New York. Similar situations occurred in other parts of the Northeast. Since the war, however, there has been an almost explosive expansion of irrigation throughout the area.

Irrigated acreage in New York state, for example, almost tripled from 1949 to 1954, approaching 60,000 acres in the latter year. It is estimated that at least 75,000 acres of crops, mostly vegetables, were irrigated in 1957, and more would have been irrigated in 1958 had it not developed into one of the wettest years on record.

There are many reasons for this expansion. A series of dry growing seasons and a surplus of aluminum from greatly expanded defense plants are important factors. Growers watched their crops wilt because of low rainfall. At the same time, manufacturers were developing lightweight and relatively inexpensive pipe well adapted for sprinkler irrigation systems.

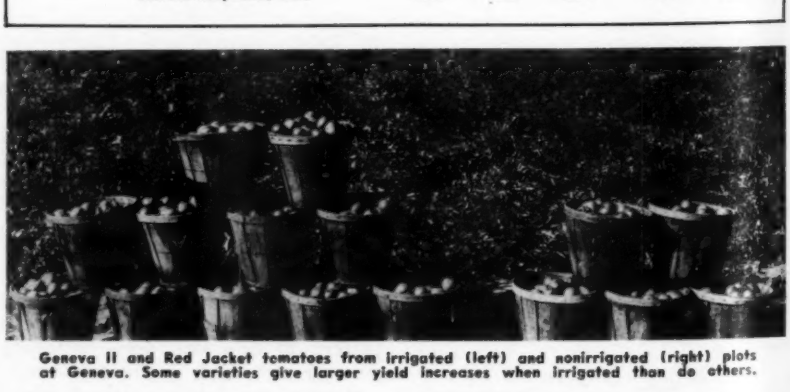
Competition from other areas of the country, notably the Southwest and West, has increased the already tight squeeze of the cost-price ratio. Since 1949 costs of farm operations have increased approximately 14%, while at the same time prices farmers receive for their products have decreased about 7%.

This has forced vegetable growers in the Northeast to develop increased efficiency or go out of business. To become more efficient producers, they have changed rotations and are using only the better, well-drained, productive soils for vegetables. They are applying more fertilizer and are adopting more effective disease, insect, and weed control programs. They are using new and improved varieties which have greater yield potential and are increasing plant populations to be sure that there are sufficient plants per acre to capitalize on these improved practices. In addition, growers are operating larger acreages for more efficient and effective use of labor as well as expensive, complicated laborsaving equipment.

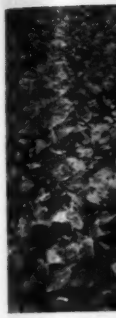
The adoption of the above-men-

**BEST RESPONSE EVER OBTAINED FROM IRRIGATION**
**Data reported by New York vegetable growers**

| CROP | GROWER | YEAR | ACRES IRRIG. | ACRE YIELD NOT IRRIG. | ACRE YIELD IRRIG. | INCREASE FOR IRRIG. |
|---|---|---|---|---|---|---|
| | | | | Tons | | |
| Snap Beans | DaPolito Bros., Clyde | 1957 | 60 | 1.5 | 2.5 | 1.0 |
| | Joseph Falcone, Silver Creek | 1958 | 10 | 3.0 | 4.2 | 1.2 |
| | Don Holdridge, Red Creek | 1955 | 27 | 1.25 | 2.75 | 1.5 |
| Cabbage | James Colby, Spencerport | 1957 | 5 | 23 | 38 | 15 |
| | John Martin, Brockport | 1955 | 60 | 12 | 28 | 16 |
| | Edward Sharp, Bergen | 1955 | 10 | 16 | 23 | 7 |
| | | | | Bushels | | |
| Potatoess | Stanley Baker, Lyndonville | 1957 | 25 | 375 | 550 | 175 |
| | Jonas Haseley, Sanborn | — | — | 475 | 675 | 200 |
| | Don Holdridge, Red Creek | 1957 | 10 | 300 | 400 | 100 |
| | Edward Sharp, Bergen | 1955 | 15 | 300 | 450 | 150 |
| | Henry Treichler, Sanborn | 1958 | 15 | 375 | 565 | 190 |
| | | | | Tons | | |
| Tomatoes | Joseph Falcone, Silver Creek | 1955 | 20 | 7.0 | 15.0 | 8.0 |
| | Francis Kirby, Albion | 1955 | 20 | 11.0 | 21.0 | 10.0 |
| | Robert Kirby, Albion | 1955 | 25 | 10.0 | 25.0 | 15.0 |
| | John Martin, Brockport | 1955 | 160 | 6.0 | 18.0 | 12.0 |
| | Don Nesbitt, Albion | 1949 | 13 | 7.9 | 16.0 | 8.1 |
| | Harold Shephard, Elba | 1955 | 28 | 10.1 | 16.5 | 6.4 |



**Geneva II and Red Jacket tomatoes from irrigated (left) and nonirrigated (right) plots at Geneva. Some varieties give larger yield increases when irrigated than do others.**



This cabbage, bed on Veeder H kept weed-free Vegadex throug

tioned practi higher costs the greater cost-per-unit vided rainfa

Growers l in too many sufficient no throughout Hence, the irrigation is producing n

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Under pr factors othe yield respon spectacular, sons such a

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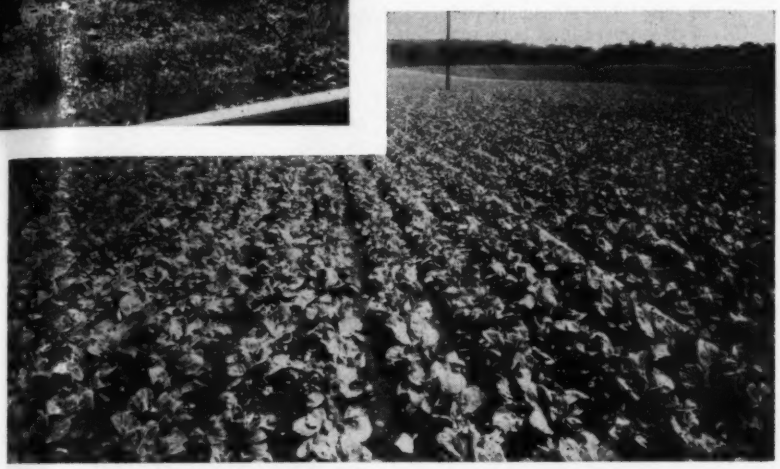
Humphrey
test field.

non-irrigated fields for comparison, and others compared their irrigated crops with those grown by neighbors on adjacent nonirrigated fields.

Three growers averaged 1.92 tons of snap beans without irrigation and 3.15 tons with irrigation—an increase of 1.23 tons per acre, or 47%, for irrigation. Three growers reported 17.0 tons of cabbage without irrigation, and 29.7 tons with irrigation, an increase of 12.7 tons per acre, or 74%. Five potato growers averaged



This cabbage, cauliflower, and broccoli seedbed on Veeder Howard farm, Fancher, N.Y., was kept weed-free in the 1958 season by applying Vegadex through sprinkler irrigation system.

tioned practices has resulted in much higher costs per acre, but because of the greater yields, has given a lower cost-per-unit of production — provided rainfall has been adequate.

Growers have found, however, that in too many years precipitation is not sufficient nor is it distributed properly throughout the growing season. Hence, they have concluded that irrigation is a necessary factor in producing maximum yields per acre.

They no longer consider it as insurance against drought, but include it as a necessary production cost, just like seed, fertilizer, and pesticides. They irrigate to make a crop—not just to save it. In this respect, they have arrived at the same conclusion reached long ago by their competitors in the arid and semi-arid West and Southwest.

Under proper conditions, when all factors other than water are optimum, yield responses to irrigation have been spectacular, particularly in dry seasons such as 1949 and 1955.

Approximately 50 New York growers were asked to report the best or maximum increases they had ever obtained from irrigation. Many of these growers were unable to furnish actual data, for usually they irrigated their entire acreage rather than part of it. Some of them, however, had

*Photo courtesy E. D. Markwardt*

These celery plants near Ithaca, N.Y., were saved from killing frost in October, 1958, by applying 1/10 of an inch of water per hour continuously from time air temperature dropped below 33° F. until the sun came out the next day and all ice had melted from the plants.

365 bushels without irrigation and 528 bushels with irrigation, for an average increase of 163 bushels per acre or 45%.

Tomatoes were the most spectacular. Six growers reported an average yield of 8.7 tons per acre without irrigation as compared with 18.6 tons with irrigation. This is an increase of 9.9 tons per acre, or 114%, for irrigation. Note that the irrigated yield of 18.6 tons per acre is quite rewarding and profitable; the breakeven yield for processing tomatoes in New York state is in the neighborhood of 10 tons per acre, depending, of course, on cost of production and price received per ton. With yields of 18 to 20 tons per acre, New York growers can make money and successfully compete with California!

In controlled experiments at Geneva, irrigation increased yields of tomatoes by 6.2, 7.1, and 5.2 tons per acre, respectively, in 1954, 1955, and 1957. Furthermore, for the three-year average, the increase due to irrigation was 5.5 tons at a "normal" fertility level, as compared with 6.9 tons at a "high" fertility level. Also, some varieties gave relatively larger increases when irrigated than did other varieties.

Over a four-year period, 1952-55, cabbage yields were increased by 4.4 tons per acre per year; during the same period, sweet corn was increased by 1.39 tons per acre per year, or 31%.

Irrigation also improves quality. With crops such as sweet corn and peas, yields are increased if irrigated plots are harvested at the same stage of maturity (as indicated by moisture content or tenderometer value) as nonirrigated plots. If harvested on the same day, yields may be practically identical, but corn and peas from irrigated plots are more tender than those from nonirrigated plots and hence bring a better price on the fresh market or from the processor.

Irrigation tends to delay the ripening or maturation of tomatoes. In

(*Continued on page* 43)

# *He Retails* His Vegetables

**At one time DeNolf had 50 acres and sold wholesale; today he has 14, doubles his profit selling at roadside**

By HERB LEE

IN this age of mechanized big acreage agriculture, there still exist farm families which successfully make their living on a few acres with their hands and the hoe.

They prefer to remain farmers rather than become farm managers or labor supervisors and have turned to selling direct to the public. This is evidenced by the increasing number of farm roadside markets that are springing up along major highways.

Leon DeNolf, who farms 14 acres in the Kansas River Valley, is a typical vegetable farmer who has made the successful conversion from wholesale marketing to roadside marketing. He sells most of his products at his roadside market near his home 12 miles west of Kansas City, Kans.

"We're open from 8:30 a.m. to 8:00 p.m. during the heavy harvest season, about July 1 to the middle of September," DeNolf explained. Actually, their sales begin in early April when they offer cabbage, broccoli, cauliflower, and lettuce plants for sale. Later there are pepper, tomato, pansy, and sweetpotato plants.

First row crops are asparagus, rhubarb, and green onions. These are followed by strawberries, turnips, beets, green beans, Irish potatoes, sweet corn, tomatoes, peppers, cucumbers, okra, cantaloupes, watermelons, and sweetpotatoes.

Mrs. DeNolf operates the market and her husband keeps her supplied with produce.

"Most of our trade is transient, but many regular customers come from nearby," Mrs. DeNolf says.

Since going out of the wholesale growing business, Mr. and Mrs. DeNolf have done all of their own farm work. For this reason they plan to keep their growing acreage small.

Even though they make a good living they must work all year around to do so. Early in February DeNolf is preparing his 50 hotbeds. Before the three months required for maturity of the plants have elapsed, he is planting in the fields. Several plantings of some vegetables are made two weeks apart to insure continuous supply during the season. He gets two crops a year from most of his land.

"We can more than double profits by retailing at our roadside market rather than selling wholesale," DeNolf said. "Even so, we can still offer produce cheaper than the stores."

The biggest selling points of DeNolf's produce are that it is always fresh and of good quality.

DeNolf is constantly striving to get the highest production possible per acre. Each fall he applies manure to his farmland. He uses the newest sprays to control insects and diseases.

"Despite new weed control methods, the hoe is still the most important implement we have," DeNolf remarked. "We are going to try a weed spray on asparagus this year, however."

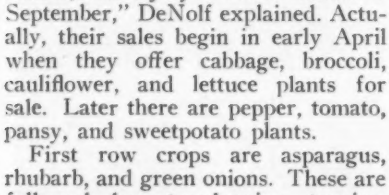
DeNolf considers his hand-oper-

(*Continued on page* 41)

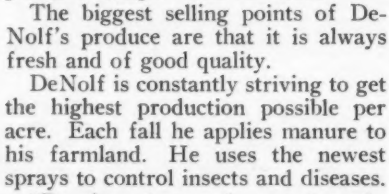
Roadside market makes a convenient outlet for these midget watermelons displayed by DeNolf.

Leon DeNolf roadside market near Kansas City, Kans. DeNolf residence in left background.

Mrs. DeNolf points to sign listing variety of fresh vegetables offered direct to consumer.



A small, hand-operated seed drill is used for variety of crops on DeNolf's 14-acre farm.



The staked tomato plants produce high quality fresh fruit, picked daily to supply customers.

Dusting eggplant helps to control insects and diseases; provides quality product for market.

# STATE NEWS

- **Labor Restraint Legislation Again Fails to Pass in New York**
- **North Dakota Growers Organize to Promote Their Produce**

### Governor Vetoes Bill

**NEW YORK**—The Mason Bill which would grant growers the right to get an immediate injunction to restrain labor from striking when perishable crops are involved was vetoed by Governor Rockefeller as ambiguous and inequitable to both growers and labor. The Governor promised another measure which would give growers the protection they want and at the same time acknowledge the right of labor in the matter of injunctions.

The main objections to the Mason Bill were that it is confined to labor disputes involving transportation of perishable products. It does not encompass disputes involving production on the farm, first storage of produce in a receiving plant, or processing by canning or freezing.

On the side of labor, the present bill would unfairly permit an injunction against a strike being conducted for a lawful purpose and by lawful means.

The Governor's proposal which seeks to correct these ambiguities will be recommended to the Legislature next January.

**Onondaga County** Vegetable Growers Co-op was shocked and saddened by the death of its vice-president, Donald Erkenback, of Fayetteville. He was killed April 24 when a tractor he was driving while drilling oats tipped over, pinning him under the machine.

### Three-Way Earworm Control

**KENTUCKY**—Three systems of controlling the corn earworm in sweet corn—a crop becoming more important to the Kentucky economy—were tried last season by University of Kentucky Experiment Station researchers.

The methods were use of insecticidal dusts (DDT and Sevin); a bacillus, called Thuringiensis, used in a spray; and 11 sweet corn hybrids considered resistant to the insect pest.

The DDT, says J. G. Rodriguez and D. J. Cotter, researchers, used as a 10% dust at 30 pounds per acre, resulted in 90% worm-free ears; the Sevin (a 5% dust), 87% worm-free ears. These dusts were applied seven times throughout the season, starting when the fields were 10% in silk.

The bacillus, applied three times, effected *no* control at all.

Of the 11 hybrids evaluated for earworm-resistance, Golden Sensation produced 96% worm-free ears; Aristogold Bantam Evergreen, 80%; Golden Security, 84%; and Deligold, 60%.

The untreated control plots had 80% worm-free ears.

**Using hormone-boron dusts** on tomatoes brought higher yields last season than hormone-boron sprays.

E. M. Emmert, Kentucky Agricultural Experiment Station horticulturist who initiated the combination material system several years ago to increase yields, said the dust raised tomato production about 3 pounds per plant over the check (no-dust) plants. The spray increased the yield only about 2 pounds over the checks in greenhouse production.

Emmert said the dust had some disadvantages, principally in field use where rains can wash the material away quickly. But it is better than the spray, especially in greenhouses, he said, as coverage is much quicker and more complete than the spray. Sprays also are harder to apply in the field.

### More Growers to Organize

**NORTH DAKOTA**—A small group of men met in Bismarck in April to discuss the possibility of organizing an association of producers, shippers and processors of vegetables grown in western North Dakota.

Martin Hoyer, Washburn potato grower, who presided at the meeting, will be joined by Owen Sheldon and Frank Josephson of Washburn, and LeRoy Huff of Underwood on a committee to explore the possibility. Hoyer feels that vegetables grown in western and central North Dakota can compete with other areas on a commercial basis if properly handled and promoted.—*Ernest W. Fair.*

### Tomato Acreage To Drop

**PENNSYLVANIA**—Prospective planted acreage of tomatoes for processing during the coming growing season is estimated to drop 24% for 1958 levels.

According to processors intentions, the Crop Reporting Service says, processing acreage in 1959 will total 16,000 or 5000 below 1958. This is 29% below the 1948-57 average of 22,600 acres.

Asparagus growers indicate they will harvest about the same acreage this year as last. During 1958 about 900 acres for both processing and fresh market were harvested.

Pennsylvania is not alone in the intended tomato acreage reduction. Based on reports from processors, the prospective acreage to be planted to tomatoes for processing this year throughout the nation is 308,000 acres. This level is 14% under the 360,500 acres planted in 1958 and 11% below average.

### Potato Disease Identified

**WISCONSIN**—A potato tuber disease known as corky ringspot, first reported in northern Florida in 1946, has been identified by University of Wisconsin scientists as a soil-borne virus disease. It is a potential danger to potato growers everywhere.

Corky ringspot is the first soil-borne virus disease of potatoes found in the U. S., although a related soil virus has plagued potato growers in Europe for years. It has been found only in Florida

(*Continued on page 37*)

## *Know Your . . .*
## VEGETABLE SEEDS

By VICTOR R. BOSWELL
*U.S. Department of Agriculture*

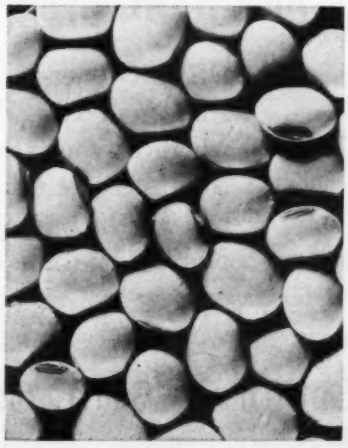
### SOYBEAN

**VEGETABLE varieties of soybeans have not become popular in this country despite many efforts to stimulate interest in their use. The soybean is highly productive of edible seeds and the seeds are highly nutritious. It is easy enough to grow but Americans have not yet learned to relish it as a vegetable.**

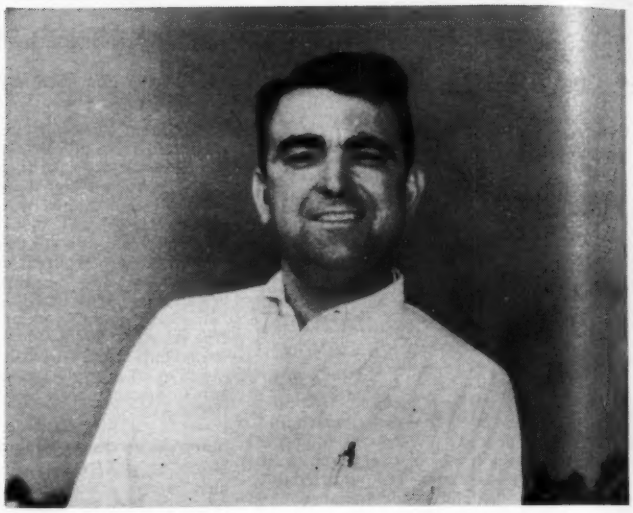
**The variety illustrated here is Tastee. These seeds are slightly oblong-flattened or elliptical, smooth, and light green. Soybean seeds vary widely in size, shape, and color even among the few vegetable varieties known in the U. S. They vary in size from about 100 to 200 seeds per ounce and from nearly globular to much flattened.**

**Seeds of the vegetable varieties are usually yellow to light green. The hilum or scar is much more prominent than in common bean and varies from colorless through light brown to brown and black. Seed coats are smooth. Typically, only two or three seeds are borne in each small, hairy pod.**

**No figures are available on the acreage or production of vegetable varieties of soybeans grown for seed or for food. Both are very small.**



# Leading growers top



## "We topped the market in price with our ORTHOCIDE-treated cucumbers"

"We topped the market in price and I firmly believe that ORTHOCIDE played a prominent part in the production of these top quality cucumbers," says Henry Crumpler, Manager of the Sampson and Bladen Farms, Roseboro, North Carolina. "ORTHOCIDE kept our vines vigorous and healthy and helped us produce the largest yield of quality cucumbers we ever had. Some of the quality cucumbers sold for as much as $5.00 per bushel."

## An ORTHO program can bring you top market prices, too!

ORTHO offers a crop protection program tailor-made for your area. And, your ORTHO Fieldman knows the particular problems wherever you farm. When you buy the ORTHO program you get the benefit of this technical field service, a half century of research, and all the scientific experience that makes ORTHO America's number one line of agricultural chemicals.

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says Ralph
of results I
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found that
the best co

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# top the market with ORTHO®!

## "I haven't lost a load of produce at the processor in several years,"

says Ralph Sharp of Hilton, New York. "That's the kind of results I achieve when I use ORTHO products. In addition to excellent control of plant diseases and insects, I get better coverage with less material. I've found that ORTHO products and field service give me the best control at the least expense."

## "Our ORTHO Fieldman's know-how helped me produce top quality crops"

"The field service that's provided us growers by ORTHO appeals to me most," says Fletcher Lett, Plant City, Florida, shown above, left, inspecting a plot of young lima beans with ORTHO Fieldman Webster Carson. Mr. Lett continues: "Our ORTHO Fieldman's know-how has helped me produce top quality vegetables."

ORTHO®

**Helping the World Grow Better**

**Scientifically trained Fieldmen located in all of the Nation's leading vegetable growing areas.**

Portland, Oregon
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Whittier, California
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Maryland Heights, Missouri
Dallas, Texas
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**Real seed experts work with crops in the fields,**

**SAYS FRED ROHNERT**

As president of the Waldo Rohnert Co., Fred Rohnert is no stranger to his company's fields of lettuce, beets, celery and other row crops. "Our breeders and scientists spend considerable time growing extensive field trials for new seeds and becoming familiar with your problems as a grower. And they personally select the best vegetables grown for further breeding toward the development of ever bigger and better crops! Look for the field expert's seed—SRS seed grown by vegetable seed specialists."

**WALDO ROHNERT CO.**

*SRS Member-Breeder of row crop vegetables*

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# PEAS and BEANS

## Growers Face Challenge

THE continued increase in the production of green peas and snap beans for processing offers a challenge and opportunity for growers who can obtain high yielding quality crops for the packaging industry.

**Green peas and snap beans** for processing are outranked only by tomatoes and sweet corn in importance in the United States.

Average yields per acre of both vegetables have risen gradually over the past 20 years.

In 1958 production of peas for canning and freezing was 377,900 acres, or more than 10% greater than the 10-year average. Yield per acre averaged 2589 pounds.

The U. S. total of snap bean harvested acreage for canning and freezing for the same period was 151,060 acres, more than 30% above the 10-year average. The average yield was 2.4 tons per acre.

**Many growers assert** that it is difficult to consistently obtain average pea yields over 2200 pounds per acre. However, in the Pacific Northwest, average yields of 4000 pounds per acre have been reported. Some individual growers throughout the country have even reported yields as high as 7000 pounds per acre.

Despite the increased use of the mechanical bean picker, snap bean yields have risen slowly throughout the production areas. The machine makes possible a "one-pick" harvest operation which has reduced labor costs and helped improve the quality of the harvested beans.

**Experimental work** in the past four years on the development of a precision planter for peas has resulted in increased yields.

The precision drill insures placement of seed 2 inches deep with little variation. The fertilizer placement equipment places the fertilizer where the roots reach it without delay. Knives used to place the fertilizer loosen the compact soil caused by heavy equipment. Uniform germination is obtained through the use of depth bands, and the press wheels firm the soil around the seed. A weeder attachment levels and loosens the soil surface for easier plant emergence.

The four- or six-row bean planter equipped with fertilizer hoppers, depth bands, and weed spray attachments also has provided an improved method of planting.

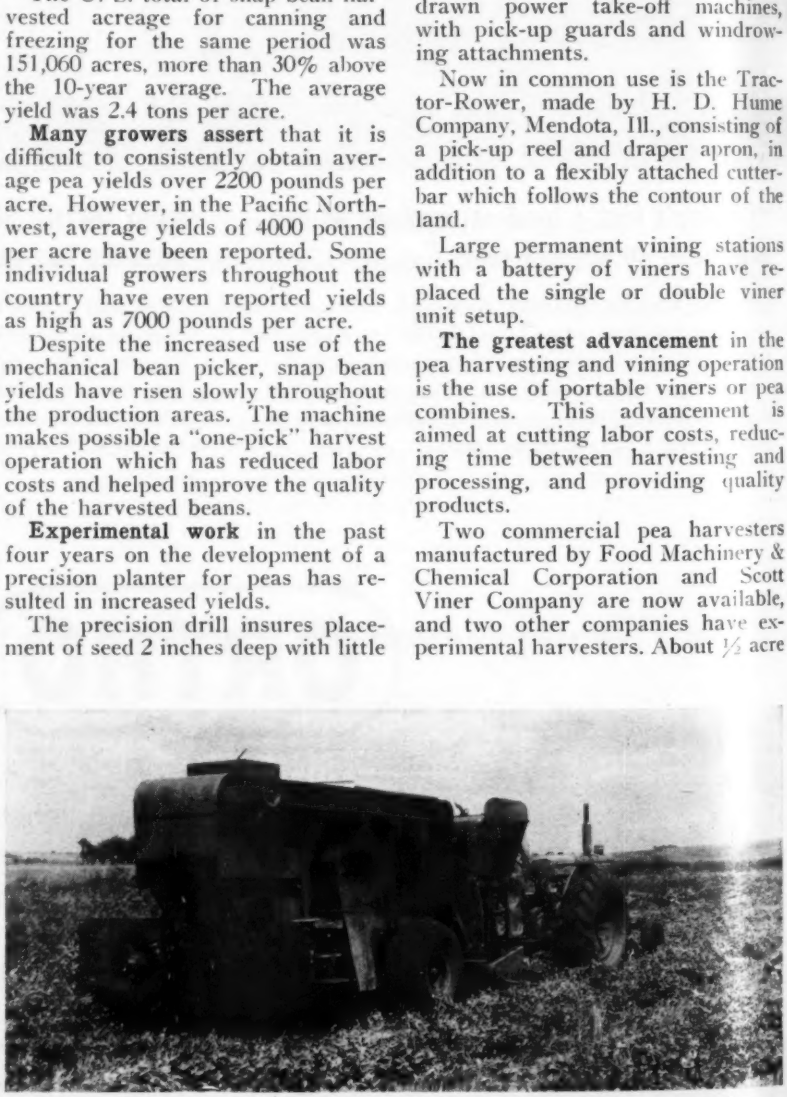
**New trends** also are taking place in harvesting operations. Pea cutting equipment has changed from horse-drawn mowers to tractor-drawn power take-off machines, with pick-up guards and windrowing attachments.

Now in common use is the Tractor-Rower, made by H. D. Hume Company, Mendota, Ill., consisting of a pick-up reel and draper apron, in addition to a flexibly attached cutterbar which follows the contour of the land.

Large permanent vining stations with a battery of viners have replaced the single or double viner unit setup.

**The greatest advancement** in the pea harvesting and vining operation is the use of portable viners or pea combines. This advancement is aimed at cutting labor costs, reducing time between harvesting and processing, and providing quality products.

Two commercial pea harvesters manufactured by Food Machinery & Chemical Corporation and Scott Viner Company are now available, and two other companies have experimental harvesters. About ½ acre



Mobile pea harvester (Food Machinery & Chemical Corp.) can vine about ½ acre per hour.

# Now use SEVIN Insecticide

## for outstanding control of MEXICAN BEAN BEETLE

**SEVIN insecticide is the new and different carbamate pesticide that bean growers have been waiting for! It controls major bean insects, and is highly effective against Mexican bean beetle. One or two applications a season often does the entire job. The cost of bean beetle control with SEVIN is low. The result is better yields and profits — with snap beans, dry beans and lima beans.**

**Hundreds of bean growers** have tested SEVIN insecticide and found it outstanding. Experiment stations find that SEVIN controls all stages of Mexican bean beetle, and makes the job easier. SEVIN also controls leafhoppers and Lygus bugs.

**SEVIN** is easy to use with safety. Tests indicate you can apply it right to the day of harvest, if necessary, without exceeding the residue tolerance. And field hands or pickers can work in the field immediately after application.

**As soon as insects appear,** sock 'em with SEVIN! This long-lasting new insecticide gives you efficient insect control with fewer applications.

***CONTROLS MAJOR BEAN INSECTS***
**MEXICAN BEAN BEETLE**
**LYGUS BUGS • LEAFHOPPERS**

**Ask your supplier now** for CRAG SEVIN 50W wettable powder for sprays. Or get a dust formulation. With either product, you get excellent insect control for a bigger, better crop of beans.

**SEE YOUR SEVIN SUPPLIER TODAY**

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COOLS
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**PROFITABLE**
Cools greenhouses 20° to 30° during hot summer months.
High quality crops grown year 'round with lush, vigorous growth throughout the hot summer.
Provides filtered, moist air — ideal for plant growth.
Reduces watering of plants and shading of glass.
Eliminates stagnant air with controlled ventilation during summer and winter.
Comfortable working conditions — more efficient employes.

**SUCCESSFUL**
During the past 5 years over 35 million feet of glass have been cooled and ventilated with FLORAL BREEZE throughout the United States and in foreign countries.

**ECONOMICAL**
Extremely economical in initial cost and operating cost.
Many growers state it pays for itself "in 3 months;" "with one crop;" "in one season."

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MUSKOGEE, OKLAHOMA

per hour can be vined under average harvesting conditions.

Vines are picked up from the windrow, the peas removed from the vines and pods, and the shelled peas stored in lug boxes or portable hoppers. The vines and waste are discharged onto the ground. Growers may cure the vines in the field, bale or chop them for feed purposes.

**With the advent** of the mechanical bean picker, many changes in the growing of bush type beans have occurred. The picker can harvest ¾ to 1 acre per hour. Pallet boxes are used to hold the beans for quick and efficient handling from picker to processing plant. The beans also may be loaded into a wagon drawn by a tractor alongside the picker.

New disease-resistant pea varieties have been developed, also snap bean varieties which can be mechanically harvested. The white-seeded bean varieties are replacing many of the brown-seeded lines.

Success of most bush-type varieties is dependent upon the location and type of pack required by the processor. Pole bean varieties are grown extensively in the West Coast area. New bush type varieties are being developed with beans comparable in quality to the pole beans or "Blue Lake" varieties.

**New locations** are becoming important bean and pea growing areas where water sources are readily obtainable.

Beans respond to irrigation with yields as high as 7000 pounds per acre with mechanical harvesting, report some growers. The snap bean plant requires an adequate supply of moisture, particularly just before and immediately after blossoming.

Meeting periodically to discuss problems confronting the industry are the recently organized National Pea Improvement Association and National Bean Improvement Association. — *W. N. Ritz, Continental Can Co., 4645 W. Grand Ave., Chicago 39, Ill.*

# VINE CROPS

## New Vegetable for the East

CALIFORNIA'S popular Banana squash shows promise of becoming a profitable new vegetable in the East.

The variety was introduced recently on the eastern market by University of Delaware marketing specialists on an experimental basis in six Wilmington supermarkets.

Consumer acceptance of Banana squash exceeded expectations. Sales averaged 2.08 pounds per 100 customers. Sales of other squash varieties were not materially affected.

According to results of experimental production of the Banana squash by the university's Agricultural Experiment Station, the "Regular Pink" strain proved most suitable for Delaware growing conditions. Net profit per acre of commercial production, in the early years of introduction at least, is estimated at $270. This compares to a normal net profit of about $40 per acre on Boston Marrow squash for processing, the only other winter-type squash grown extensively in the state.

## Bred for Flavor

ALTHOUGH the Homegarden cantaloupe is not recommended as a commercial and shipping variety, it has proven to be a favorite in Mississippi on the local market as well as for home use.

Released in 1956 by Mississippi Agricultural Experiment Station,



**Sweetness of Homegarden makes this variety a favorite on the local market and for home use.**

State College, Homegarden was bred for flavor and sweetness. The melon has a high sugar content, and when harvested in late summer and in the fall, it is exceptionally sweet.
It resists left worms somewhat.

Fruit is of medium size, globe-like, sparsely netted, with a small flat button (blossom end), thick flesh, thin rind, and small cavity. Flesh is rich salmon, very firm at ripening, but becomes soft later. Vines are vigorous and produce well.

The variety has shown moderate field resistance to downy and powdery mildews and high resistance to aphids. It also is somewhat resistant to leaf worms.

## No Seed Problem

WATERMELON fans won't have to contend with the seed problem this summer. Production of the hybrid seedless type is expected to reach 5700 tons this year, four times the 1958 figure. Although the seedless type costs about 30% more than the other varieties, growers say they are sweeter and more solid.

# Tailor-Made for Vegetables!

## *New* Agricultural Grade

# Grace Crystal Urea

**Fertilizer Compound**

## low biuret

**(Less than 0.2%)**

**and completely water soluble!**

**1. Safe! Especially Formulated for Foliar Application.**

**2. Makes Possible Maximum Yields and Top Quality.**

**3. Saves Time, Labor, Equipment.**

The low biuret content of new Grace Crystal Urea gives you concentrated nitrogen (46%) that's *completely safe* for foliar application.

The nitrogen in Grace Crystal Urea is *immediately* available to plants, and the nitrogen goes to work almost at once. Supplying this *extra* nitrogen in this easy way gives you maximum yields *and* top quality.

Response in terms of improved foliage, color or growth may be seen within a few days after spraying. Even when soil conditions are poor—for example, when there is excessive dryness, wetness, cold, or leaching from heavy rains—response from foliar feeding with Grace Crystal Urea is good—and fast.

Grace Crystal Urea can be added to your regular insecticides or fungicide formulations and sprayed at the same time you apply these materials. You do two jobs at once, which frees men and equipment for other work.

Grace Crystal Urea is compatible with commonly used spray materials. The crystals dissolve readily and completely, won't clog spray hoses, valves or nozzles. Solutions of Grace Crystal Urea are non-corrosive—won't harm rubber, metal or wood.

**FOR SOIL APPLICATION** use free-flowing Grace Urea Prills. Guaranteed 45% Nitrogen. Ideal for Top-Dressing or Side-Dressing of fruits and vegetables, as well as field crops.

**Grace Chemical Company** *A Division of W. R. Grace & Co.*

MEMPHIS, TENNESSEE

**Sweet Corn researchers are growers, too . . .**

"You can learn and do a lot in the lab when it comes to plant breeding, but there's no substitute for working with corn as it actually grows in the field," says Dr. Stuart Smith, our Research Director and the nation's foremost hybrid sweet corn authority. "My research and breeding people have been growers—and they still are . . . *specialist* growers, each one a corn expert. When you buy Sweet Corn Research seed, with the bright blue SRS label, you are buying seed developed by specialists for your particular growing needs!"

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# TOMATOES

## Fertilizer Under Seed

A SMALL amount of fertilizer placed 2 to 4 inches directly under tomato seed has proved very beneficial for San Joaquin County, California, tomato growers. Over half of this county's 40,000 plus acres of cannery tomatoes are direct-seeded in the field. Nearly all of this acreage is now fertilized under the seed.

In the method of field seeding tomatoes, the land is first prepared for planting by disking two ways as soon as it dries sufficiently in the spring. Fields are usually touched up with a land plane to assure a level field for irrigation.

The field is then furrowed out for irrigating and seeded at the same time. The usual practice is to mount furrow openers on the front tool bar of a wheel tractor with the seeders on the rear bar. The seeder runs on the edge of the furrow so that the seed is planted 2 to 3 inches from the furrow edge to facilitate wetting by the irrigation water.

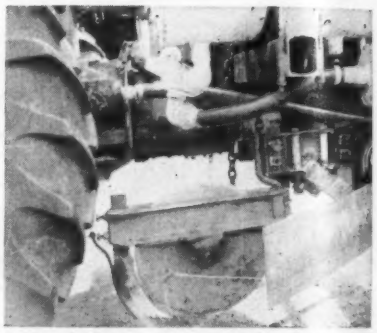
Tomato rows are spaced 5 to 6 feet apart. The tractor wheels correspond to the furrow spacing, with the planters placed to the inside of each wheel. The furrow openers are mounted in line with the wheels and the rear tractor wheels serve to firm the furrow. With the advent of fertilizer placement under the seed, a fertilizer shoe is mounted just ahead of the opener.

**Normally, early growth** of tomato seedlings was slow. Shortly after emergence, the characteristic purpling of the leaves was quite similar to what might be expected of phosphorus deficient plants, yet none of the fields responded to side-dressed phosphorus fertilizer applications and soil analysis indicated that the soils were adequately supplied with phosphorus.

In 1955, an enterprising fertilizer salesman noting that agricultural extension service trials in another county on phosphorus deficient soils had obtained a tremendous increase in early growth, tried placing phosphorus under the tomato seed in a few rows in several fields. At thinning time, the plants in the fertilized rows had made four to five times more growth. The next year a few growers tried fertilizing under their tomato seed. At the same time a large scale replicated test plot was conducted by Dr. John C. Lingle of vegetable crops department, University of California, and the author.

In this trial, 25 pounds per acre of phosphorus alone and 25 pounds of phosphorus combined with 20 pounds per acre of nitrogen were placed 2 inches under the seed at time of seeding.

Keith Reeve, vice-president, California Tomato Growers Association, and John P. Underhill examine fertilized and unfertilized tomato plants.



Special liquid rig for peat soil which normal fertilizer shoes tear apart. It flat plants seeds into moisture of sub-irrigated fields.

At the same time three different combinations, 120 pounds per acre of nitrogen, 120 pounds of both nitrogen and phosphorus, and 120 pounds each of nitrogen, phosphorus, and potash were placed 6 inches to the side and 6 inches deep without any fertilizer placed directly under the seed. One treatment with nitrogen and phosphorus under the seed was side-dressed with 120 pounds of nitrogen per acre.

**There was no difference** between the unfertilized plants and those with the fertilizer placed 6 inches to the side of the seed. Where the fertilizer was placed *under* the seed, however, there was over a *fourfold increase* in plant growth. The addition of nitrogen to the phosphorus under the seed resulted in more growth and better color than from phosphorus alone.

The difference in plant growth between rows receiving fertilizer under the seed and those without fertilizer under the seed was still visible in the early part of July even though fertilizer was side-dressed on some of these rows at time of seeding.

As the plants neared maturity, the fruit on those fertilized under the seed ripened first.

**Both liquid and dry** fertilizers are applied under the seed. Dry fertilizer hoppers are mounted on the front tool bar. Some rigs have liquid fertilizer

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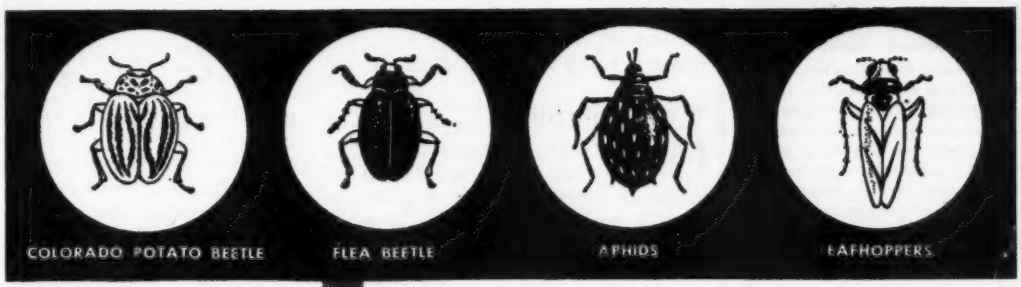
**A Noteworthy New Broad Range Insecticide for Potatoes**

# Kills 'em All!




## THIODAN HAS THESE ADVANTAGES

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Thiodan when compared with other sprays by State Experiment Stations gives better control of aphids, leafhoppers and flea beetles. Higher yields too!

**Safer to Handle**

Growers are glad to have a "moderately toxic" potato spray to replace toxic phosphates.

**Lasting Effectiveness**

Insect control lasts longer with Thiodan. Saves applications.

**Easy to Use**

No bad odors—no irritations—also compatible with usual potato fungicides.

## THIODAN GIVES ONE SHOT CONTROL OF ALL COMMON POTATO PESTS

Thiodan is a name for potato growers to remember. It is an important new discovery. Thiodan provides broad-range use and sure-kill effectiveness against *all* potato insects. With Thiodan you get a multiple kill of several potato pests at the same time. This means new ease and convenience plus economy in protecting your crops.

Thiodan is easy to use either as a miscible or wettable powder. It mixes readily with the commonly used potato fungicides and has none of the hazards of some more toxic materials.

Thiodan has been thoroughly tested by leading experiment stations throughout the country and is being recommended for potato insect control.

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Many vegetable and fruit growers have already learned they can increase crop yields by as much as 50% with irrigation systems. However, until now, most piping materials have been very expensive and heavy, requiring a complicated and costly installation that many farmers cannot afford. His only other choices were impermanent, low-pressure, easily damaged materials recently put on the market.

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tanks on each side of the tractor body. Many liquid rigs pull a wheel-mounted tank behind. Some growers furrow out and fertilize first and then seed in a separate operation. A few growers have rigged up sled planters which furrow out, fertilize, and plant in one operation. These are pulled by track-layer type tractors.

**Fertilizer types** used by growers vary widely. Liquid types include 8-24-0 and 20-20-0. Dry types are 16-20-0, 21-53-0, 11-48-0, and 13-39-0. All have performed equally well in tests and in commercial use. Most are applied at rates of 100 to 200 pounds per acre.

The results of these trials were so widely publicized and so well-received that from a handful of growers experimenting with fertilizer under tomato seed in 1956 the number rose in 1957 to over 200 growers or 95% of those who direct-seeded tomatoes in San Joaquin County. This represented over 20,000 acres of tomatoes. —*John P. Underhill, San Joaquin County Farm Advisor, Stockton.*

### Weed Control

GRANULAR herbicides are effective in controlling weeds in tomatoes. Barry Hughes, a graduate student in Horticulture at Pennsylvania State University, has successfully used Chloro IPC, Randox, Vegadex, and Premerge. These same chemicals applied as sprays would have severely injured the tomatoes.

## ASPARAGUS

### Quack Grass Control

IN GROWING asparagus on a commercial basis, one of the major problems is keeping the fields free of weeds and grasses, particularly in the row.

At Hillcrest Acres Farm near Cobourg, Ont., Canada, we had summer-fallowed the land during the 1954 season and planted it with two-year-old asparagus roots the following spring. At that time it seemed clear of grass and weeds.

During the next two years, sickness prevented the mowing of adjoining areas. By the spring of 1958, the prevailing westerly wind had seeded grass and weeds three-quarters of the way across the field.

**The quack in the rows** was the real problem. It was decided that a selective chemical which would kill grass but not asparagus was the only practical method to pursue.

We decided to use Dowpon (Dow Chemical Co.) and to apply it with a knapsack sprayer. It appeared that the rate of application could be more precisely controlled with this type of sprayer.

**The manufacturer** suggests the use of 10 to 15 pounds of Dowpon in the amount of water required for good spray coverage. Our plan was to spray the rows to an average width of about 30 inches. Therefore, we had to experiment with mixtures. The optimum, of course, would be the minimum amount of chemical per gallon of water which would produce 100% kill without detrimental effect to the soil or asparagus.

Much to our surprise we were right the first try. One gallon of spray material was made up consisting of 1 gallon of water, 1 ounce of Dowpon, and ½ ounce of 2,4-D ester, the latter to take care of the weeds.

We sprayed this mixture along the fence where some volunteer asparagus was growing in the grass. All the asparagus was cut out and a band about 30 inches wide sprayed.

**This test** was observed for two weeks. The effect of the spray on the asparagus was nil. As new shoots grew they were cut in order that new growth could be observed. Since nettles are very susceptible to 2,4-D, the chemical caused wilting of the leaves the next day.

It was about two days before the grass showed a slight brownish color at the tips and along the edge of some of the leaves. Finally the green gave way to dry brown plants. At the end of two weeks a sample of the roots was dug up. They were dead.

**Shallow cultivation** between the rows at 10-day intervals was being carried on meanwhile during the cutting season. This resulted in almost complete elimination of the grass and weeds in that area.

On July 2 the rows were cut clean of asparagus for the last time in 1958. It was one of those mornings with no wind, and the barometer was steady at 30.38. The spray was applied. To each gallon of water was added 1 ounce of Dowpon and ½ ounce of 2,4-D ester. In four hours the job was completed. It required 31 gallons of water and the cost of the chemicals was about $4.00.

At the end of eight days, 1000 pounds of 5-10-13 fertilizer was broadcast along the rows and the field was disked both ways.

**The result** of these operations was quite satisfactory. The grass was completely eliminated. Only a few weeds appeared during the rest of the summer. The asparagus made excellent growth until frost.—*W. A. Shane, Coburg, Ont., Canada.*

Dow Chemical Co. recommends using at least 15 pounds of Dowpon per ac. for a single treatment to satisfactorily control quack grass under normal conditions.

# MARKETING

## The Turnpike Age

"THERE just won't be any good roadside place for me to sell my products after the new turnpike comes through," the operator of one successful farm market told me the other day. Similar expressions of concern about the new super highways had been heard before from other roadside marketers, and the questions they raised demanded some careful reflection and study.

It is true that limited-access highways annually are carrying a greater portion of through traffic in many states. Countless miles of additional super highways are on the drawing boards of the road planners. It also is true that farm roadside marketing, as we have known it up until now, is prohibited by the policies which govern the administration of most modern super highways.

**The main theory** behind controlled-access highway development, in fact, is to free through traffic from

**An entirely new concept of farm roadside selling may be required to meet the challenges imposed by limited-access highway development.**

the delays and safety hazards associated with numerous roadside businesses and intersections with other roads. Only those businesses considered essential to the traveler, such as restaurants and filling stations, are permitted in the so-called service areas provided for such establishments.

It is possible for visitors and natives alike to travel all the way across some of our rich agricultural states, such as New Jersey, with no opportunity to see, much less purchase, the farm commodities on which that state prides itself.

Here we have another problem, one we might refer to as the public relations problem of the agricultural interests in a given state. Still, the problem comes closest to home when operators of existing markets discover that a super highway will be built nearby. Of course these marketers are going to worry about the possible loss of transient trade.

**One thing is certain.** More and more super highways will be constructed, and they should be.

It's just as certain that the individual grower will have trouble trying to find a solution to the problem. Only through co-operative effort, through joint study and planning, can farm roadside market operators negotiate successfully for an opportunity to do business in the service facility areas of the limited-access highways.

**More emphasis** is being placed on free enterprise in the service area operations, as stated in the report of the President's Advisory Committee on a National Highway Program: "In constructing a controlled-access system, care must be exercised to insure that traditional free enterprise is promoted and that no monopolistic tendencies develop in the provision of needed facilities to service the highway user . . ."

One proposal calls for several businesses in each service area, including competing restaurants and filling stations. The present restaurants are operating gift shop subsidiaries, selling toys and other non-essentials. If there is a place for farm roadside market outlets in these service areas, it will be up to an organized group of market operators to prove it and to propose a method for establishing and operating uniform facilities with uniformly high standards.

In Canada the precedent already is established. Four roadside markets were constructed by Ontario Department of Highways along the limited-access Queen Elizabeth Way between Niagara Falls and Hamilton. Local fruit and vegetable producers use the markets during the regular roadside marketing season to supply quality fresh produce to tourists.

**Even the problem** of turnpike promotion of state agricultural products is being tackled. Pennsylvania's Governor Lawrence met recently with the Turnpike Commission and solicited help in promoting the state's products in the service areas. The commission has agreed to the governor's request and will arrange for co-operation among the service facility concessionaires.

The age of turnpikes brings with it very challenging questions for roadside marketers. Further expansion of the 40,000-mile National System of Interstate Highways will intensify the questions. They merit immediate thought and investigation in your state if a solution is to be found that will prove satisfactory.—*Robert L. Bull, Ext. Marketing Spec., U. of Delaware, Newark.*


# "WHO STEALS MY PURSE STEALS TRASH"

OLD SHAKESPEARE had a good idea, but have you considered the opposite to his thought? It would go like this: "Who steals my trash, steals money."

It is strange that the word we use for stubble, crop residues, weeds, etc., is 'trash'. We use the same word for anything useless, anything fit only to be thrown away. Yet plant trash is the most important ally of the nurseryman, as trash, weeds and crop residues contain within themselves the secret of fertility.

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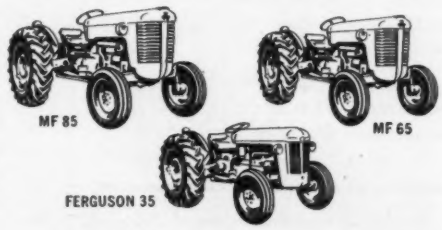


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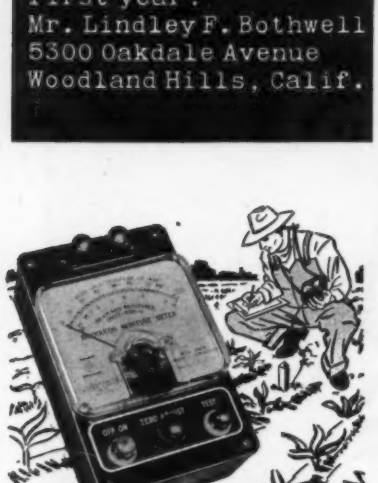

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# GOVERNMENT AND UNION TAKE AIM AT FARM LABOR

## You may expect increased activity to unionize and control farm labor

By MATT TRIGGS

EARLY in February a so-called "hearing" was held in Washington by National Farm Labor Advisory Committee, an unofficial committee appointed by National Sharecroppers Fund.

National Sharecroppers Fund is a front for AFL-CIO. It is financed primarily, if not entirely, by that organization.

This was called a hearing, but a more accurate description would be that it was a national kickoff meeting of a campaign to accomplish four purposes:

1) The enactment of minimum wage legislation for farm workers.

2) The unionization of farm workers.

3) The elimination or curtailment of the foreign labor importation program so as to create a national farm shortage.

4) An interpretation of the Wagner-Peyser Act which would accomplish federal regulation of the farmer-worker relationship.

At this meeting of National Sharecroppers Fund, William Schnitzler, AFL-CIO secretary-treasurer, told the applauding audience that "after some months of study and consultation we have formulated a program for an organization campaign among farm workers which will be submitted for approval to the next meeting of the executive council."

**The February meeting of National Advisory Committee on Farm Labor was an eye opener for farm leaders. American Farm Bureau Federation's Assistant Legislative Director Matt Triggs, in a recent speech at Rockawalking, Md., gave his analysis of the far-reaching results which could take place. Excerpts from his talk are printed here.—Ed.**

Since then, the executive council of AFL-CIO has met in Puerto Rico and has appropriated money to accomplish this objective. What may turn out to be their major technique has been disclosed. This is to put crew leaders on union payrolls as organizers and to sign workers as union members as they join the crew.

**The organization** of farm workers means the subservience of farmers to labor unions. Farmers are the most vulnerable employers in the world because they cannot stand a strike during a harvest period, which is, of course, the time a strike would be called.

You can't close down a farm like you can a factory. If a farmer could not get his crops harvested, he would lose not only his year's income, but a substantial investment in producing the crop as well. Thus, any effective organization of farm workers would mean that the farmer would pay whatever wages and provide whatever working conditions the labor union decided to require.

It is probable that during the first year or two of such an arrangement, all would be sweetness and light. Farmers who accepted such a proposal might well be supplied with an unusually competent crew, but it would only be a question of time until the union would be telling the farmers how much they had to pay, the conditions of employment, the checkoff of union dues, the arrangement for labor union stewards, and so on.

**Next is the question** of the enactment of minimum wage legislation for farm workers. We can expect a major legislative effort, perhaps this year, to provide federal regulation of wages and hours for farm workers.

The initial proposal will probably not be applicable to more than 1 or 2% of all farmers, but once the principle of federal regulation of wages and hours in agriculture is established, it can be gradually expanded in succeeding years.

Legislation authorizing the Mexican Farm Labor Program must be renewed next year. If this labor force of 450,000 is subtracted from the farm labor picture, the farm labor supply situation will tighten like a drum in every corner of the nation. AFL-CIO has already indicated its opposition to extension of this program unless it is extensively modified.

**It was with more** than casual interest that we heard a so-called witness explain at the National Sharecroppers Fund meeting that in 1933 Congress approved the Wagner-Peyser Act which created the state and federal employment services, and that this act could be used as the legal basis for regulation of the farmer-worker relationship to almost any extent deemed desirable by the secretary of labor.

This witness had been an employee of the Department of Labor up until two weeks before he appeared as a witness at the meeting.

We were even more appalled the following week at a meeting of National Farm Labor Advisory Com-

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mittee to receive a copy of proposed regulations to accomplish comprehensive regulation of the farmer-worker relationship.

The proposals would require any farmer who wishes to use the employment service to recruit either domestic or foreign workers to comply with certain regulations.

First, the farmer would be required to comply with housing standards acceptable to the Department of Labor. The Department insists that it must regulate farm labor housing despite these facts: that 20 states now have a migratory labor housing code; that in 21 states the governor has created a commission on migratory farm labor and among the first things such committees undertake is the revision or drafting of state migratory farm labor housing codes; that the Council of State Governors has created two continuing regional committees—one for the Atlantic Coast and one for the central area—and these committees are studying state action in this field.

**With respect to wages,** the proposed regulations provide that "the wage rate offered by an employer and shown on his order for agricultural workers is not less than the prevailing wage rate paid in the area to domestic agricultural workers similarly employed"—or "wage rates paid most recently by employers who are or have been successful in recruiting and retaining the services of domestic agricultural workers."

In plain English, this means that every farmer may be required by the employment service to pay wages equal to those paid by the farmer who pays the highest wage in the area.

The index of farm wages in January, 1950, was 429. In January, 1959, nine years later, it was 610. Farm wages thus are six times the level prevailing in 1910-14. Farm prices are two and a half times the level prevailing in 1910-14. Farm wages are increasing at approximately twice the rate of increase in the cost of living.

**In the case of transportation,** the proposed regulations require that the employer must agree to "provide transportation arrangements for agricultural workers not less favorable than the transportation arrangements generally provided by other employers who have successfully recruited out-of-state workers."

If some farmers have followed the practice of paying round-trip transportation for farm workers, farmers in other areas could be required by the employment service to do likewise.

**The proposed regulations** further provide that "the employer must comply with non-discriminatory practices

(*Continued on page* 34)

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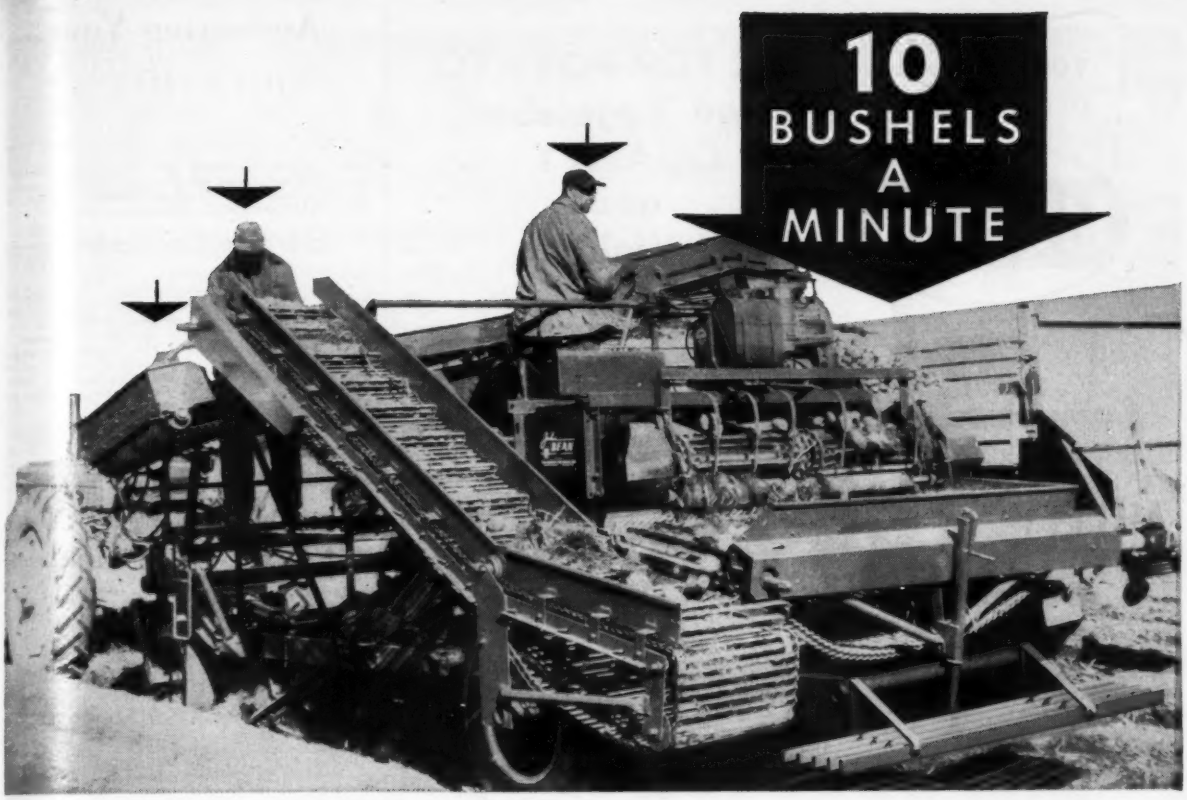


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# Answering Your QUESTIONS

**Don't let your questions go unanswered. Whether large or small, send them with a four-cent stamp for early reply to Questions Editor, AMERICAN VEGETABLE GROWER, Willoughby, Ohio.**

### POTATO SEED PROBLEM

**I have a potato that is about what I want for myself and my customers. The customers are well pleased and most of them order their winter potatoes from me in the early summer. I have been planting seed for about five years now and what I want to know is if I plant small whole potatoes, will they have a tendency after a year or two to throw my potatoes back to a late crop?—*New York***

No, any potatoes that come out of one hill, be they large or small, will inherit the tendencies to mature at the same season that the parent hill matured, although no two years are exactly alike. If the large and small potatoes from a given hill were planted in adjacent rows and fertilized alike, they would mature at approximately the same time.

Most potato growers prefer small seed, and table stock growers who buy certified seed usually pay from 25 cents to 50 cents more per hundred pounds for the B size which is small enough to plant whole.

### SOIL SHREDDER

**Where can I purchase a motor-driven soil grinder or pulverizer for shredding muck for greenhouse use?—*Michigan***

From Lindig Mfg. Co., 1875 W. Country Rd., St. Paul 13, Minn.

### PLANT DISEASE CLINIC

**I understand there is a plant disease clinic at our state college. How can I use this service?—*North Carolina.***

Residents of North Carolina should observe the following instructions, according to M. E. Gardner of North Carolina State College: Send a representative sample. When it is necessary to send an entire plant, dig it out so that the root system will not be damaged. Fleshy vegetables should be collected in the first stages of disease infection and all samples should be fresh.

Wrap plants in moistened paper and cover with waxed paper or aluminum foil. Don't overcrowd or crush. Vegetable specimens should be wrapped separately in waxed paper.

Pack in a rigid container to prevent crushing. Identify package both inside and out. Address package to Plant Disease Clinic, Box 5397, State College Station, Raleigh. Time your mailing so that the package will arrive Monday through Friday rather than over the weekend.

### OKRA CULTURE

**I fertilized with 5-10-5 before planting my okra seed but wonder what further practices I should follow to produce a top-notch crop. —*Louisiana.***

Apply 20 to 30 pounds of nitrogen per acre after the first few pods are harvested, says Joseph Montelaro, horticulturist at Louisiana State University's extension service. This causes the plants to continue growing and producing okra. In late June or July, the large plants can be cut off at a height of about 12 inches. Now shoots will begin to grow and a late summer and fall crop of okra will be produced. At this time you can apply complete fertilizer, if needed.

### TOMATO HORMONE SPRAY

**I read an article in a Dutch growers' magazine about a tomato hormone spray. It is called Duraset and is used for better setting of the clusters. Could you tell me who manufacturers it?—*Canada.***

Naugatuck Chemical Div., U. S. Rubber Co., Naugatuck, Conn.

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Fresh market produce growers know they can rely on GER-PAK *Sunlight-resistant Black* Mulch Film to mature crops at the best time for top market value. *And* they know their crops will show increased yields with improved size and quality.

Mulching with GER-PAK Polyethylene Mulch Film prevents weed growth and minimizes rotting of produce caused by contact with the soil.

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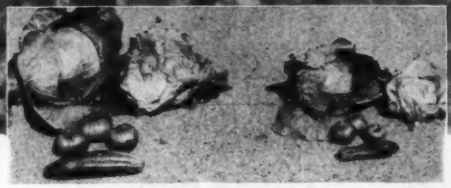

SIGNIFICANT YIELD INCREASES result whenever GER-PAK Mulch Film is used. Fruits and vegetables are generally of better quality and rotting is minimized because the fruit is not in contact with the soil.

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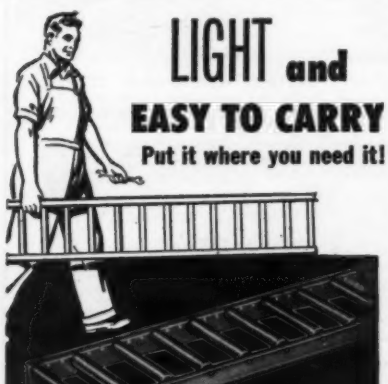

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# As It Looks To Me

By JOHN CAREW
*Michigan State University*

CUCUMBER growers all over the country will be interested in the recently published detailed survey of the Michigan pickle industry. With partial financial support from National Pickle Packers Association, Michigan State University agricultural economists Johnson, Hathaway, Stuckman, and Gallardo analyzed the operations of 79 typical pickle growers and interviewed 312 Mexican national pickers. Here is what they learned:

*Costs of growing an acre of pickles were $84.* Major items were plowing and planting, $9; cultivating and hoeing, $18; fertilizer, $14; irrigation, $13; and hauling to receiver station, $12. This did not include a charge for the land, normally 5% of the land value.

*Growers harvesting the state average yield or below made little or no profit.* Here is how acre yields were related to net returns, excluding land charges:

| YIELD PER ACRE | % OF GROWERS | NET RETURN |
|---|---|---|
| 80-119 | 15 | —$5 |
| 120-199 | 36 | $12 |
| 200-299 | 26 | $39 |
| 300-399 | 19 | $73 |
| 400-499 | 4 | $113 |

*High yields were associated with fertilizer rates and frequency of dusting and spraying.* Growers in the 300+-bushel-per-acre group used more fertilizer and kept weeds and insects under better control.

*Mosaic-resistant varieties paid off.* The highest yielding fields were generally planted to Wisconsin SMR-12 or M-57, a variety distributed by H. J. Heinz Company. Varieties susceptible to mosaic, such as SR-6, were badly affected by mosaic in 1958.

*Part-time pickle producing poses problems.* Here is how off-farm employment was related to yields:

| OFF-FARM EMPLOYMENT | BU. PER ACRE | NET RETURN |
|---|---|---|
| None | 225 | $45 |
| Part-time (3 months or less) | 215 | $36 |
| Part-time (4 to 11 months) | 171 | $18 |
| Full-time (12 months) | 165 | $ 9 |

*Good labor supervision was related to high yields.* A total of 82% of the Mexican national pickers had no previous pickle picking experience. Fields frequently visited by labor supervisory personnel averaged 323 bushels in contrast to 179 where there was no contract with field men.

*Short pickers earned more money than tall ones.* Any tall person can tell you he has to go farther to get to the pickles. Workers over 5 foot, 8 inches earned on the average 70 cents an hour; those less tall made 77 cents.

**A most significant** finding in this valuable report is the fact that low yields are more related to the individual grower than to soil type, area of the state, climate, or processing firm. A grower harvesting only 100 bushels per acre can have a neighbor picking three times this yield. Both are on the same soil, with the same weather conditions, and the same varieties. What accounts for the difference in yields?

According to Dr. S. K. Ries, Michigan State University department of horticulture, the answer in Michigan is a combination of many cultural practices, especially fertilizer, spacing, and cultivation. His four years of research on pickle growing have led to these conclusions:

*Close spacing favors high yields.* Fields with plants 6 inches apart in the row gave early yields up to 40 bushels higher than those at 18 inches. Total yields were similar. High early yields can mean the difference between profit and loss when disease or early frost shortens the season.

*Deep and close cultivation is a common cause of low yields.* Pickle plants root close to the soil surface; unlike cabbage, tomatoes, and so forth they do not form new roots readily. In an experiment comparing cultivation methods, shallow cultivation gave yields of 375 bushels, and deep cultivation, 318. Growers should cultivate as shallow and as frequently as possible to control weeds.

*Pickles require plenty of phosphorus.* For soils not previously tested, Dr. Ries recommends 400 to 600 pounds per acre of a 5-20-10 fertilizer. Soils testing higher in phosphorus and potash may need only half this amount.

*Weeds and insects can be controlled.* A band of Alanap-3 and dieldrin sprayed over the row within 48 hours after planting is successfully used by many Michigan growers.

*Plant only disease-resistant varieties.* Wisconsin SMR-12, SMR-15, and SMR-18 have given superior yields. Other excellent varieties resistant to mosaic and scab are M-57 and SMR-58. THE END.

## LABOR REFORM BILL PASSED BY SENATE

THE labor reform bill passed by the U.S. Senate in a 90 to 1 vote on April 25 contains two provisions of especial interest to vegetable growers. One provision is that no union or union representative may demand or accept a fee for unloading a truck. The second provision is that a contract between a teamsters' union and a truck common carrier containing a "hot cargo" clause is an unfair labor practice and any such contractual provision is unenforceable.

However, a McClellan amendment to outlow secondary boycotts was defeated 50 to 41. Amendments were also rejected prohibiting organizational or recognition picketing and giving jurisdiction to the states to handle legislation covering labor disputes of a local nature.

Next step is approval of the labor reform bill by the House of Representatives. The House is expected to take up the bill in June or shortly after you receive this issue of AMERICAN VEGETABLE GROWER.

# SWEET CORN

### Vacuum Cooling

NOT SO long ago, sweet corn had to be grown near the market so it could be rushed to the user while it was still edible and attractive. All this has been changed by recently perfected methods of rapid cooling, including hydrocooling, and maintenance of protection. Sweet corn responds as few other vegetables do to refrigeration treatment.

The latest method is moisturized vacuum cooling. This has long been known to lettuce growers, and is now seen as a practical and, in the long run, economical method for sweet corn.

**Research has disclosed** that removal of the surface field heat at the precooling stage by water baths is not enough. Cob temperature must be lowered to the optimum level before loading if the corn is to arrive on the shelf in best condition.

Moisturized vacuum precooling cools the corn quickly and uniformly from cob to shuck at 36 to 40° F., the range that must be reached to minimize the sugar to starch conversion cycle. Once this range is achieved, it is easily sustained by conventional transit refrigeration.

**Located on a well-traveled highway? Then you may want to attract the motorist with a good-looking display of vegetables. Working drawings for an easy-to-build roadside stand are available for $2.00 from AMERICAN VEGETABLE GROWER, Willoughby, Ohio.**


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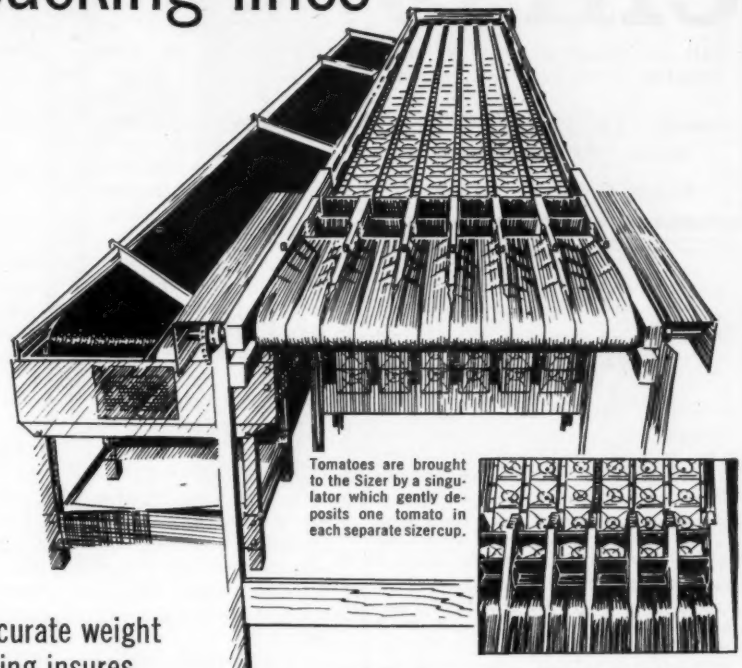

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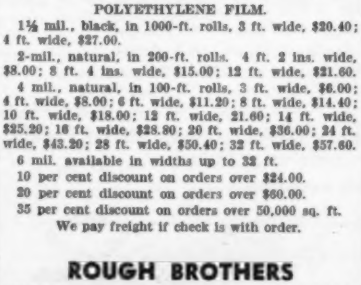

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# GREENHOUSE CROPS

## Better Understanding

SOME 40 Ohio greenhouse vegetable growers from the greater Cleveland area returned home from their annual trip with a better understanding of greenhouse operations in Ontario, Canada.

Over the past 11 years tours have been made to greenhouse areas throughout this country and Canada. Harold S. Ward, Cleveland, former country agricultural agent, arranged the first of these trips in 1949. Object of these visits has been to learn how other growers manage their crops, with primary interest focused on greenhouse operations. Since Cleveland greenhouse tomatoes are marketed in major midwestern terminals, every opportunity has been given to inspect wholesale food terminals.

**This year's** four-day tour began with a stop at the Mikkelsen greenhouses in Ashtabula, Ohio. A new idea in ventilation is being used here, without the customary roof ventilators. Air is drawn through side vents with large fans installed on the opposite side wall. Humidity and cooler air can be increased by pressure water nozzles installed along the side vents. An aluminum English greenhouse with 24-inch glass also was on display.

Greenhouse vegetable production is scattered in Ontario. Vineland, St. Catherines, and Toronto have limited acreage compared with the Cleveland area. Greatest concentration of glass is in Leamington. Cleveland growers who visited this area eight years ago found about 50 acres in vegetables under glass. Jack Cutcliff, Ontario extention specialist, explained that there is now 120 acres under glass and more houses will be going up.

**Essex County** growers accompanied the Clevelanders through a number of modern greenhouses in Leamington. Cucumbers are still the chief spring crop. Secretary Guyitt of Essex Associated Growers predicts more spring tomatoes will be grown. Planting the Ohio variety W.R.3 and W.R.7 has contributed to a better market and increased production of tomatoes.

A recently-organized packing plant in Leamington has already doubled its floor space. Markets for their major cucumber crop extend to Vancouver. Tomatoes will gradually take their place, according to some growers. The pink Ohio varieties are being tested and grown on a larger trial basis.

**The construction business** is booming throughout Ontario. Cleveland growers toured the new Toronto Food Terminal, already surrounded by new buildings. The best vegetable growing areas are being sold for the Seaway Industrial Expansion.

Young men are assuming responsibilities of leadership in Ontario grower organizations. Young men such as George Gibson in Toronto, Jerry Long of London, and Tom Scott of Leamington are heading their local grower groups.

Thousands of baskets of Cleveland-grown tomatoes change hands in Detroit's huge food terminal. Harry Becker's outlet there was of great interest to the Cleveland shippers.

**Canadian vegetable** growers returned the visit of Ohioans by attending Greenhouse Vegetable Day at Ohio Agricultural Experiment Station, Wooster, on May 7. The next day they toured Cleveland greenhouses and a co-operative packing plant. Encouragement was given to the Leamington growers by I. J. Kusse, veteran Cleveland grower and a founder of the packing company. He told them the greenhouse industry began here before the turn of the century. The packing plant has had a slow but successful growth for over 25 years.—*Fred K. Buscher, Cuyahoga County Agr'l Agent, Cleveland, Ohio.*

## FARM LABOR

(*Continued from page 28*)

established by law or public policy."

Would this provision, for example, mean that a farmer would have to employ any person referred to him, even if this meant mixing up racial groups in any farm labor camp? Does this mean that it would be discriminatory if a farmer refused to employ a union-organized crew referred to him by the employment service?

**The most obnoxious thing** about the proposed regulations is not so much what is in them, but the fact that they are so vague and ambiguous. No farmer will be able to know how they are to be applied to him until some official of the Department of Labor tells him, and when he *is* told, that will be the law so far as he is concerned, and there is no appeal except to higher officials in the same agency.

It is the position of Farm Bureau that this reach for power by self-righteous bureaucrats of the Department of Labor must be thrown back.

A late report brings information that the Attorney General of the United States will rule on whether or not the Labor Department can regulate farm labor under the Wagner-Peyser Act.



POT

Outstanding

THIMET, which has cess in contro hopper, has be this crop.

Dr. J. P. Sl chemical for

'SPUD

Sale of "Spud Gun will account for a tatoes. Nearly 2 n a recent New Yo turers.

Agricultural Wooster, repo Administratio sion for the Cyanamid Co met to the pu tion. Thime vegetable ins approval by

Use of Th yields by 100 systemic is planting time of the 10% acre.

Although standing co with Thimet mained some ever, dramat when Thime bined.

Unlike m main at or plant tissue such as Th becomes a

Irrigating

SOME gr use of i not use en point out C Kidder, Mic

As an ex cite a southe er who uses fertilizer th ing. His po by only 40 acre costs o irrigation s $40.

However successful calm Count were using more fertil irrigators. more per a irrigated.

JUNE, 1959

# POTATOES

## Outstanding Success

THIMET, a systemic insecticide which has scored outstanding success in controlling the potato leafhopper, has been approved for use on this crop.

Dr. J. P. Sleesman, who tested the chemical for three seasons at Ohio Agricultural Experiment Station, Wooster, reports that Food and Drug Administration has granted permission for the manufacturer, American Cyanamid Company, to release Thimet to the public for potato production. Thimet is the first systemic vegetable insecticide to be granted approval by the federal government.

**'SPUD GUN' SALES SOAR**

**Sale of "Spud Guns," which shoot potato pellets, will account for about 12 million pounds of potatoes. Nearly 2 million of the guns were sold at a recent New York toy show, report manufacturers.**

Use of Thimet also has increased yields by 100%, says Sleesman. The systemic is placed in the furrow at planting time at the rate of 25 pounds of the 10% granular formulation per acre.

Although Sleesman obtained outstanding control of the leafhopper with Thimet, adult flea beetles remained somewhat of a problem. However, dramatic results were obtained when Thimet and dieldrin were combined.

Unlike most chemicals which remain at or near the surface of the plant tissues, a systemic insecticide such as Thimet enters and actually becomes a part of the plant tissues.

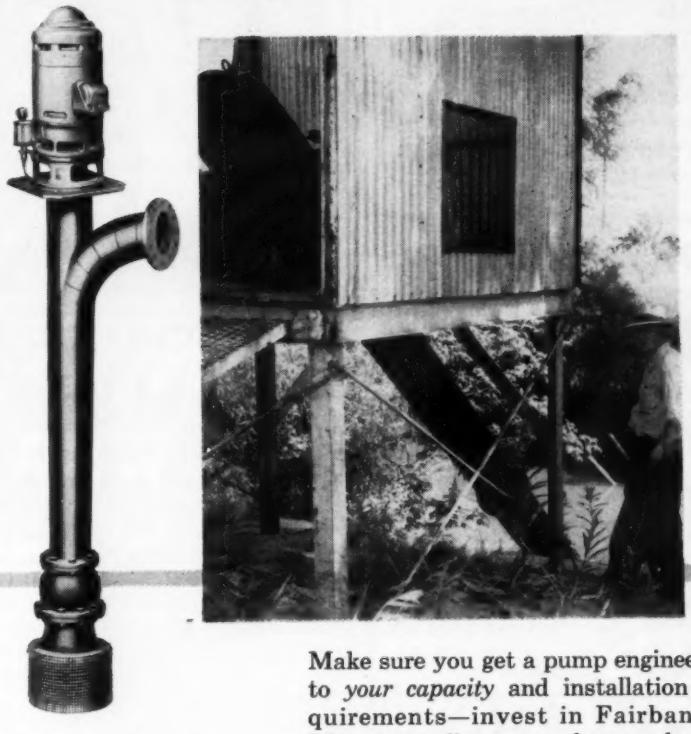
## Irrigating for Profit

SOME growers fail to make top use of irrigation because they do not use enough seed and fertilizer, point out C. R. Hoglund and E. H. Kidder, Michigan State University.

As an example, the two scientists cite a southern Michigan potato grower who uses very little more seed and fertilizer than he did before irrigating. His potato yields have increased by only 40 bushels per acre. The per-acre costs of owning and operating an irrigation system add up to more than $40.

However, a study of two groups of successful potato growers in Montcalm County shows that the irrigators were using 25% more seed and 60% more fertilizer per acre than the non-irrigators. Yields were 132 bushels more per acre when the potatoes were irrigated.


**Name your angle!**



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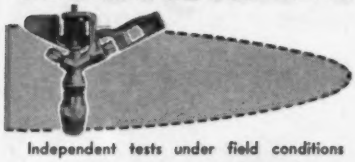

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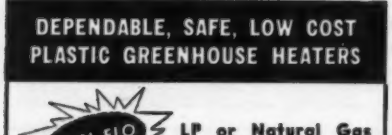


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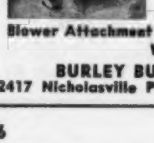

**Blower Attachment**

WRITE
**BURLEY BURNER CO., Inc.**
2417 Nicholasville Pike Lexington, Ky.

1959 officers. Left to right, front row: William Monfort, Jr., president, Georgia; Ralph Harper, vice-president, New York; Kay Huntley, secretary, Illinois; back row: regional directors, Carol Ann Green, S.C., Richard Juhl, Colorado, Peter Ochs, New York, and William Lorenz, Illinois.

# NJVGA CONVENTION PREVIEW

**Trip to USDA Agricultural Research Service, Beltsville, and career panel discussion to highlight 25th meeting**

ELABORATE plans are being formulated to make the 25th anniversary convention of National Junior Vegetable Growers Association an outstanding event. The dates are December 6 to 10, with convention headquarters at Hotel Roosevelt, Washington, D. C.

The nation's capitol is a logical choice for this milestone event; it offers a wealth of historical, educational, and scenic possibilities for the more than 500 boys and girls expected to attend the meeting.

**Each NJVGA convention** is an education in itself. Many parts of the country have been visited since the first meeting was held in Hartford, Conn., on August 22, 1935, with 74 boys and girls from Massachusetts, Connecticut, and New York participating in a Vegetable Judging contest. Since that time industries, markets, and historical sites have been visited and growing procedures observed from Boston to New Orleans and as far west as Tulsa.

This year's program is no exception. Tentative plans call for a tour of points of interest in and around Washington on December 7. A behind-the-scenes visit to USDA Agricultural Research Service, Beltsville, Md., combined with a tour of Annapolis is scheduled for December 8.

**Leading Washington** personalities will participate in a panel discussion on various phases of career opportunities in the fields of horticulture and agriculture which will highlight the Career Breakfast on December 9.

On December 9 also, the preliminary judging in the National Demonstration Contest will take place, with the finals to be held the following day. In addition, the National Judging, Grading, and Identification Contest is reserved for the last day. Awards and recognitions will be presented at the annual banquet the evening of December 10, climaxing the convention.

For further program details write Grant B. Snyder, National Chairman, NJVGA, French Hall, University of Massachusetts, Amherst, Mass.

First official NJVGA officers elected at 1939 Chicago convention, left to right: Arthur Doust, vice president, Ohio; Aubert Johnson, president, New York; Louise Mullen (Mrs. Virgil Phelps), New York; Robert Arvidson, Illinois; Harvey Billings, secretary-treasurer, Massachusetts.

## STATE NEWS

(*Continued from page* 13)

in this country, but Wisconsin plant pathologists are checking a similar type of internal browning of potato tubers found in Indiana and Washington to see if it is caused by the same virus.

Should the disease appear in Wisconsin, seed potatoes from infected fields could not be certified, according to R. H. Larson and C. H. Walkinshaw, who are conducting research on the disease. Florida Sebago potatoes infected with the virus show marked brown, slightly sunken rings or line patterns, as well as shallow, irregular corky depressions, with brown dead tissue underneath these outside features. Peppers also are infected with the virus when grown in virus-infected soils.

### Processing Plant Expands

**GEORGIA**—Southern Frozen Foods, Inc., has recently completed an extension of its Montezuma plant which will house special equipment for the processing of green beans. It will also be used for processing peaches and sweetpotatoes.

Although green beans have not been a product of this plant, it is expected that 2 million pounds or more will be snapped, boxed, and quick frozen in 1959.

The addition has upped the plant's former freezing capacity of 200,000 pounds a day by 30%.

**Spalding,** a new small-fruited watermelon, has been released by University of Georgia Experiment Station at Experiment.

Classified as an icebox melon, this fruit is of high quality and resists wilt, anthracnose and pimples, and is highly resistant to sunburn.

It is late-maturing and shows some hollow heart. The fruit is round and varies in weight from 10 to 25 pounds, but is usually less than 15 pounds. It has a thin, tough rind, dark green color, and is very sweet.

**The Georgia Crop** Improvement Association has added Garrisonian watermelon and Earlysweet sweetpotato to its list of certified seed.

**The state's watermelon** crop will be decreased by 13,000 acres this year with a total of 50,000 acres being planted. The Crop Reporting Service gave unfavorable weather conditions as the cause. *Pauline T. Stephens.*

### Defoliating Tomatoes

**CALIFORNIA**—Points for and against defoliating tomatoes are given by G. E. May, Stanislaus County farm advisor. For: 1) Increased pick due to better visibility. Under heavy vine conditions late in the fall, as much as 2 tons per acre more fruit have been picked in the dessicated area. 2) Mold decrease, 3) Improved color. 4) Faster drying of fields. Against: 1) No greater rapidity of fruit ripening. Ripening is influenced largely by average hourly temperatures rather than sunlight intensity or maximum and minimum daily temperatures. 2) More shriveled fruit. A bright, hot day can easily cause fruit to sunburn even when plants have not been defoliated.

### Another Produce Market

**NORTH CAROLINA** — Farm Fresh Foods, Inc., of Gatesville, differs little from the average produce market, with one big exception. Vegetables are hydrocooled and packaged before shipment.

Located in Gates County in the northeastern part of the state, the new market was opened this month. Main crops handled at the market include snap and butter beans, sweet corn, peppers, sweet-


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**Roadside Marketing**

*By R. B. Donaldson and W. F. Johnstone*

A practical handbook for the successful operation of a roadside market, based on many years' study of "on-the-farm" marketing in all parts of the country. It covers building stands, handling and storing produce, packaging, pricing, and advertising, and is illustrated with plans, charts, photographs, and drawings.

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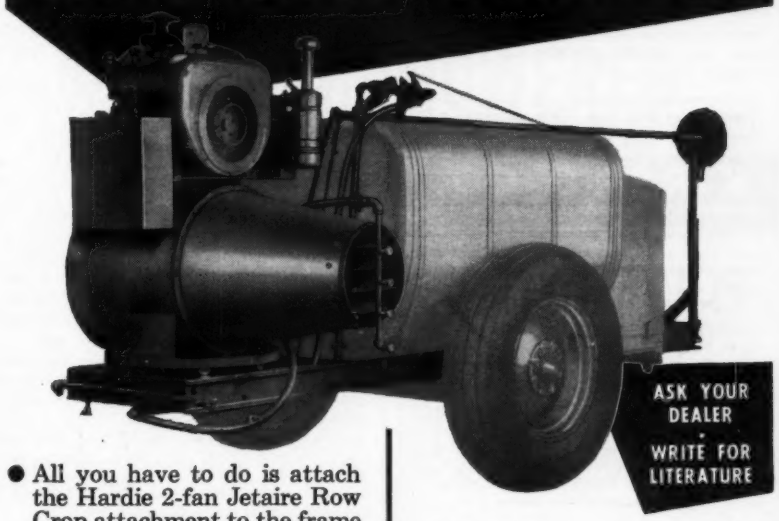


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- High velocity air—15,000 cfm—from two, 26 inch axial flow fans puts the spray where you want it, regardless of wind.
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- Easy reach controls at tractor seat.
- Adjustable air outlet in discharge housing provides control of air on plants close to sprayer.

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potatoes, apples, and peaches, with emphasis on watermelons. Several thousand acres of choice quality watermelons are produced in the area.

The new corporation was organized last year by 25 business men, headed by Paul F. Edmond, of Gatesville. Don C. Hall, fruit grower of Hendersonville, is general manager. Previously Hall was territorial representative in the fresh fruits and vegetables division of Food Machinery and Chemical Corp., of Lakeland, Fla. He is active in National Market Managers Association.

Edmond is president of the corporation; Jack Carroll, vice-president; Dr. LeRoy Hand, Jr., secretary; and Allen E. Askew, treasurer.

Farm Fresh Foods is located in a new building. Opening of the market was heralded by a giant auction, with Hall, a licensed auctioneer, in charge. He was assisted by Philip Cronkhite, of Horry County Farmers Market, Loris, S.C.—*Carlton Morris, Gatesville.*

### Cucumber Contract Offered

**TEXAS**—Growers in the South Texas area have been offered a contract to grow pickling cucumbers for Pace Foods Company of San Antonio. The offer included growers with ½ acre or more.

David Pace, an official of the firm, said his company would purchase all the cucumbers grown on a given acreage and guarantee the grower a price agreed on prior to planting.

**The acreage planted** to spring tomatoes in Lower Rio Grande Valley did not equal the five-year average, but less acreage than usual was lost because of low temperatures. At the close of the cold danger season, crop conditions indicated a smaller spring tomato acreage for harvest than normal. Late spring blight has caused the loss of some acreage.—*Raymond E. Hunt.*

### More Potatoes To Fresh Market

**IDAHO**—Over half of the potatoes produced by growers in the state are now going to sources other than the fresh market, according to the periodical report of the Idaho Potato Control Commission.

The report shows that 30,653 carloads, or 45%, are going for seed, export, food processing, starch and livestock feed, while 37,854 carloads, or 55%, are going to the fresh market.

**Onion shipments** from Treasure Valley will be at least 1000 carloads more than last year's shipment, according to Tom Jones, Union Pacific freight agent in Nyssa.

Last year's total shipments were 3116, and by March, 3935 cars had already been shipped. "We anticipate between 275 and 300 more cars will be shipped before the 1958 season comes to a close," Jones said. —*Ernest W. Fair*

### NEW MAINE PUBLICATIONS

**Three new potato publications have been issued by University of Maine Extension Service: Bul. 474, *For Better Potato Quality;* Cir. 346, *Production Practices—Key to Potato Quality;* and Cir. 347, *Is Your Planter Applying the Right Amount of Fertilizer?* These publications were prepared by Paul N. Mosher, extension service crops specialist. Maine growers may obtain copies from their county agents or by writing Bulletin Office, Extension Service, University of Maine, Orono.**

### Potential Vegetable Area

**NEBRASKA**—With 2.5 million acres now under irrigation and a potential of 4 million acres, Nebraska, with its favorable climate and excellent soil resources, may well become an important vegetable-producing area.

It seems certain that most of the major canning crops can be grown in the irrigated sections of the state. The tomato has received most attention as a possible crop thus far. Fruit yields of 20 or more tons per acre are to be expected with good cultural practices and yields approaching 30 or more tons per acre have been harvested in experimental plots. Both yield and quality of asparagus, green beans, table beets, cabbage, carrots, cucumbers, onions, squash, pumpkin, sweet corn, and broccoli have been satisfactory in preliminary trials.

### Greenhouse Spring Report

**OHIO**—Paul B. Ruetenik, president, Cleveland Greenhouse Vegetable Growers' Association, rated this year's crop of tomatoes grown under glass in the Cleveland area, the greenhouse capitol of America, as the best in many years. More sunlight during the early months of this year was the chief reason for the quantity and quality of the crop.

Growers anticipate the spring crop will be over 25 million pounds from the more than 350 acres under glass. About 75% of the greenhouse-grown tomatoes are shipped to Boston, New York, and other east coast cities, and west to Chicago and Milwaukee.

The annual spring report was given recently at the greenhouse of A. G. Heinrichs, chairman of the news committee

**Paul B. Ruetenik, left, and A. G. Heinrichs show tomatoes grown in Heinrichs' greenhouse.**

of CGVGA where members of the press, radio, and television were invited to the luncheon. A unique feature was that guests were encouraged to pick their own salads—tomatoes, Bibb or leaf lettuce, and cucumbers—from the vines!

### Processors Want Orange Potatoes

**NEW JERSEY**—Sweetpotato processors demand a deep orange interior color of sweetpotatoes for canning purposes.

To be sure of the inside color, the potato can be cut lengthwise before bedding. This is an old custom used when medium to large potatoes were used for propagation.

Cut potatoes should be treated immediately after cutting and before bedding. Dr. Robert H. Daines, plant pathologist at Rutgers University Agricultural Experiment Station, has tried 30 or more materials to prevent rotting of potatoes. He found that dipping the potatoes into a material called Dyrene (Chemagro) used at the rate of 1 pound to 5 to 10 gallons of water, was most effective.

Sweetpotato growers who are especially interested in selecting sweetpotato seed with a deep orange inside color should cut a bushel or two of potatoes. The sprouts from these cut potatoes should be planted separately from the main planting.



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## CALENDAR OF COMING MEETINGS AND EXHIBITS

**June 10**—Pennsylvania Potato Industries, Inc., annual stockholders meeting, Potato City Hotel near Coudersport.—Don M. Cresswell, Penna. Potato Growers, Harrisburg.

**June 11-13**—Idaho Grower-Shippers Association Inc., annual meeting, Sun Valley, Idaho.—Association headquarters, P. O. Box 1100, Idaho Falls, Idaho.

**June 17**—Annual Field Day, Truck Crops Experiment Station, Crystal Springs, Miss.

**June 17**—Truck Crops Experiment Station field day, Crystal Springs, Miss.—Chesley Hines, Extension Hort., State College.

**July 7-9**—10th Annual Fertilizer conference of Pacific Northwest, Winthrop Hotel, Tacoma, Wash.

**July 20-22**—10th Annual Potato Utilization conference, Idaho Falls, Idaho.—George W. Woodbury, University of Idaho, Moscow.

**July 30**—Orchard and Field Crops Day, Mahoning County Experiment Farm, Canfield, O.

**Aug. 6**—Empire State Potato Club Summer Field Day, Allen Acres, Waterville, N. Y.—Frederick P. Howe, Program Chairman, Bouckville, N.Y.

**Aug. 9-12**—American Institute of Cooperation 31st annual summer session, University of Illinois, Urbana.—G. J. Jordan, Dept. of Agricultural Economics, University of Illinois, Urbana.

**Aug. 11-12**—Ohio Pesticide Institute, Ohio Agriculture Experiment Station, Wooster.

**Aug. 12-16** — Potato Association of America 43rd annual meeting, University of New Brunswick, Fredericton, N.B., Canada. In charge of reservations: Mrs. M. E. MacGillivray, P.O. Box 230, Fredericton, N.B.

**Aug. 17-21**—Annual Farm and Home Week, Clemson Agricultural College, Clemson, S.C.—Thos. W. Morgan, Gen. Chairman, Clemson Agricultural College, Clemson.

**Aug. 22**—Maine Vegetable Growers field day, Highmoor Farm, Monmouth, Me.

**Aug. 25-Sept. 26**—A European Holiday for Horticulturists, including visits to greenhouse areas in England and Holland during seven-country tour.—Under leadership of Harold S. Ward (retired Cuyahoga County, Ohio, agricultural agent), 7393 Nethersole Dr., Cleveland 30, Ohio.

**Aug. 27**—Sweet Corn Day, Northwest Washington Experiment Station, Mount Vernon, Wash.

**Aug. 27-30**—American Society for Horticultural Sciences tour through southeastern Pennsylvania including visits to vegetable farms, greenhouses, mushroom houses.

**Aug. 30-Sept. 3**—American Institute of Biological Sciences and member biological societies, including American Society for Horticultural Science annual meetings, Pennsylvania State University, University Park—R. E. Larson, Chairman, Penn. State Univ., University Park.

**Sept. 13-16**—Produce Packaging Association 9th annual convention and exposition, Sheraton Hotel, Philadelphia, Pa.—Robert L. Carey, Exec. Sec'y, South College Ave., Newark, Del.

**Sept. 14-16**—United Fresh Fruit and Vegetable Association annual merchandising and marketing conference, Drake Hotel, Chicago, Ill.—Association headquarters, 777 14th St. N.W., Washington 5, D. C.

**Sept. 14-16**—Texas Citrus and Vegetable Growers and Shippers meeting, Hotel Statler Hilton, Dallas.—Austin E. Anson, Exec. Vice-Pres., 306 East Jackson, Harlingen.

**Sept. 23-25**—Florida Fruit and Vegetable Association meeting, Hotel Fontainebleau, Miami Beach.—Joffre C. David, Sec'y-Treas., Orlando.

**Oct. 4-7**—National Association of Marketing Officials annual convention, Asheville, N.C., and Atlanta, Ga.—Wm. A. Wunsch, Pres., State College, N.M.

**Oct. 21-23**—National Agricultural Chemicals Association 26th annual meeting, French Lick-Sheraton Hotel, French Lick, Ind.—Lea S. Hitchner, Exec. Sec'y, 1145 19th St., N.W., Washington 6, D. C.

**Oct. 27-29**—Western Growers Association meeting, Ambassador Hotel, Los Angeles, Calif.—Frank E. Castiglione, Sec'y, 3091 Wilshire Blvd., Los Angeles 5.

**Nov. 12**—Washington State Council of Farmer Co-operatives annual meeting, Hotel Chinook, Yakima, Wash.

**Nov. 19**—New Jersey Marketing Institute annual meeting, Princeton.—Tunis Denise, Freehold, Pres., New Jersey Agricultural Society.

**Dec. 6-10**—National Junior Vegetable Growers Association convention, Roosevelt Hotel, Washington, D. C.—Grant Snyder, National Chairman, French Hall, University of Massachusetts, Amherst.

**Dec. 7-10**—Vegetable Growers Association of America annual convention, Dennis and Shelburne Hotels, Atlantic City, N. J.—Mrs. Mary Hays, Acting Exec. Sec'y, 528 Mills Bldg., 17th St. and Pennsylvania Ave., N.W., Washington 6, D. C.

**Jan. 25-30**—New Jersey Farmers Week, Trenton.

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## AIR-BLAST SPRAYERS

(*Continued from page* 9)

disease conditions as severe as any the tomato grower is likely to encounter under Ohio conditions.

A count made of the fruits destroyed by late blight one week before and at the time of the first picking on August 28 showed that very good control of late-blight fruit rot was being obtained with all combinations of gallonage and pressure and with both types of application (air-blast and fixed-boom).

At the 40-gallon rate the larger spray droplets formed at 60 psi did as well as the smaller ones that resulted from a relief-valve-pressure setting of 300 pounds. Also, there was very little difference in the degree of disease control obtained by the use of 10, 20, and 40 gallons of spray formulation per acre. It should, of course, be understood that the concentration of the spray formulations was varied in such a way that 3 pounds of maneb were always applied to an acre of tomatoes, regardless of the volume of water used to spray that acre.

In these preliminary counts the percentage of disease control, calculated on the basis of the number of diseased fruits in the untreated check plots, for the air-blast sprayer varied from 98.6 to 99.2, compared to an average of 98.8% with the fixed-boom hydraulic sprayer. In other words, an average of 270 rotted fruits in each 70 feet of untreated check row was reduced to an average of only three or four in the same length of the differently sprayed rows.

However, it was with the variation in disease control in the different rows of the 12-row air-blast swath (the swath pattern of disease control) that we were primarily concerned.

In the data representing the whole season, the average percentage of the diseased fruits picked from each row of the four 12-row swaths treated with the air-blast sprayer and numbered from 1 to 12 in a north to south direction across the swaths, was: Row 1) 0.54, 2) 0.92, 3) 1.22, 4) 1.30, 5) 1.34, 6) 2.49, 7) 2.65, 8) 2.22, 9) 1.82, 10) 1.46, 11) 0.74, and 12) 0.42. The corresponding average percentage value for the rows sprayed with a fixed boom was 1.2, and for the unsprayed check rows the average percentage of fruits affected by late blight was 73.7.

Rows 1 and 12 were those under the sprayer as it was driven up one side of the swath and back on the other while the in-between rows were being sprayed. The disease control on rows 1 and 12 under the sprayer, and on rows 2 and 11 which were next to the sprayer, was better than with the fixed boom, but for all other rows in the swath the control was somewhat less. The average for rows 3 and 10 was 1.34%; for rows 4 and 9, 1.52; for numbers 5 and 8, 1.78; and for the two center rows of the swath (6 and 7), 2.57.

These percentage values demonstrate the decrease in control that occurred as the distance from the sprayer outlet increased (up to 36 feet), with about three times as many diseased fruits in the center rows of the swath as in those next to the sprayer. Although this disease percentage of 2.57 was about twice as great as that for the fixed boom sprayer, it still represented 96.5% control compared with the untreated check.

However, the increase of about

**Experimental air-blast sprayer used on tomatoes in 1958 at Ohio station's test farm at Hoytville.**

50% in the amount of disease present as the distance from the sprayer outlet increased from 21 to 27 feet (rows 5 and 8 versus rows 6 and 7) indicated that the swath width over which disease control would be satisfactory might not be much more than the 36 feet used in this experiment.

**The degree of control** of anthracnose fruit rot by the four different air-blast treatments varied but little, from 2.16% for the 10-gallon application to 2.70 when 20 gallons of spray were used. Since 12.30% of the fruits that escaped late blight infection in the untreated check were affected by anthracnose, the average percentage of control for the four air-blast treatments was 81%, which is about as good as is ever obtained, even by fixed-boom hydraulic applications. In this instance the average percentage of anthracnose-diseased fruits in the fixed-boom plot was 2.44, or slightly greater than the average for the air-blast treatments.

When the percentage of fruits infected by anthracnose on the different rows of the 12-row swath was averaged for the four air-blast treatments, it was found that 5 of the 12 rows had fewer affected fruits than were present in the average row sprayed with the standard hydraulic application of 160 gallons at 300 psi.

**Thus, because of** the degree and character of the control of late blight

and anthracnose fruit rots in this experiment, and under weather conditions that were very favorable to the development of late blight, it seems safe to assume that an air-blast sprayer *properly used* to apply a suitable fungicide is as capable of giving a satisfactory degree of control of most row-crop diseases as is one of the more thoroughly tested fixed-boom types.

However, the implications of the phrase "properly used" must be carefully considered. This means that the following precautions should be observed: 1) The sprayer should not be operated during periods when the wind velocity is much in excess of 8 or 10 miles per hour. 2) The use of an excessively wide swath (distance between driveways) should be avoided. 3) The spray material should not be applied below the minimum gallonage and pressure for good foliage and/or fruit coverage. 4) The interval between spray applications should be short enough to insure, insofar as possible, the constant protection of old and new foliage against infection by whatever diseases the plants may be susceptible. THE END.

## HE RETAILS

(*Continued from page* 12)

ated push-type garden tractor his most useful implement. A small riding tractor is used for cultivating and their large tractor is used mainly for plowing and seedbed preparation.

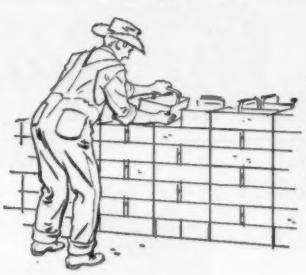
Picking the produce remains a backbreaking and tedious task on the DeNolf farm. "They'll never invent machines to pick every type of crop on a vegetable farm," DeNolf commented. "We can't even trust hired help to pick our beans."

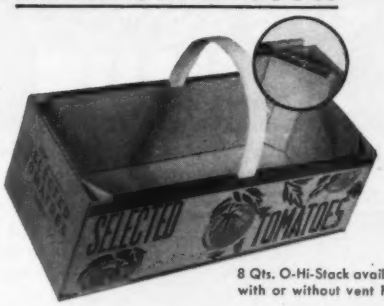
**Actually, the devastating** 1951 flood in the Kansas River Valley which wiped out practically all of their worldly possessions helped force the DeNolfs to give up raising crops for the wholesale market.

At the peak of their vegetable growing career, they farmed 50 acres. All their produce was sold at the wholesale market in Kansas City, Mo. Huge crews of migrant workers, mostly from Arkansas, were hired to pick the crops. The DeNolfs raised such a variety and volume of vegetables that they were harvesting and marketing almost every month of the year.

However, DeNolf would not trade his roadside market for any new wholesale venture. He is cutting down wisely on his farming activities, but has no thought of retiring. Now 64, he intends to remain a gardener the rest of his life. THE END.


# New O-HI-Stack Basket gives you safer storage and shipment...*at no extra cost!*






8 Qts. O-Hi-Stack available with or without vent holes

As another example of Planned Packaging, new corner post construction of this double-wall corrugated basket greatly increases stacking strength for extra fruit and vegetable protection.

You get the same fast, easy set-up, choice of wood or wire handles. Stock or custom 2-color designs build brand preference. Colored board at slight extra cost.

*For free samples write to attention of Produce Sales Division.*

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| **4 in.** | | | | | |
| 500 to 2,000 | 500 | $29.25M | 32# | $28.75M | 32# |
| 2,500 to 9,500 | | $26.75M | | $26.25M | |
| **3 in.** | | Square | | Round | |
| 1,000 to 9,000 | 1,000 | $18.25M | 37# | $13.25M | 25# |
| 10,000 to 49,000 | | $17.00M | | $12.25M | |
| **2¼ in.** | | Square | | Round | |
| 2,000 to 18,000 | 2,000 | $11.00M | 36# | $ 7.25M | 29# |
| 20,000 to 74,000 | | $10.25M | | $ 6.75M | |
| **1¾ in.** | | Square | | | |
| 2,500 to 17,500 | 2,500 | $ 7.00M | 28# | | |
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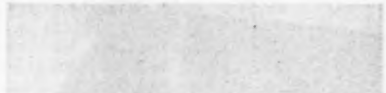
# New for You

## Air-Carrier Sprayers

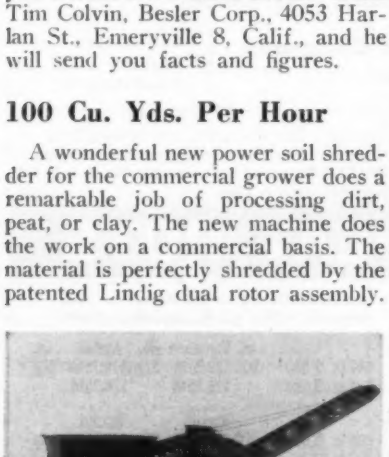
Florida growers tell me that air-carrier sprayers make spraying easier, quicker, safer, and give better control. Compaction is avoided, and the need



to fill the spray tank as on conventional models is drastically reduced. "It's possible to spray 20 acres in one hour and a half," says Bob Sickles, of New Jersey. The new Besler row crop air-blast sprayer is something you should know more about. Write Tim Colvin, Besler Corp., 4053 Harlan St., Emeryville 8, Calif., and he will send you facts and figures.

## 100 Cu. Yds. Per Hour

A wonderful new power soil shredder for the commercial grower does a remarkable job of processing dirt, peat, or clay. The new machine does the work on a commercial basis. The material is perfectly shredded by the patented Lindig dual rotor assembly.



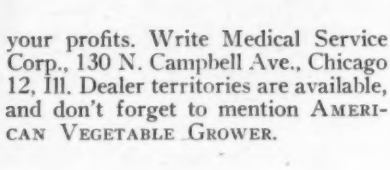
Special design allows non-shredding materials such as rocks to pass through without damage to the shredding hammers. Mounted on pneumatic tires, the machine is easily maneuverable. Write Frank Lindig, Lindig Mfg. Co., 1875 W. County Rd. C, St. Paul 13, Minn.

## Z. I. P.

Growers out in the Midwest are reporting excellent control of rabbits with a new repellent called Z.I.P. The chemical is safe to use on tender vegetables, although it should not be spread on plants after the fruiting period. Z.I.P. is available to our readers in quarts and gallons. Fool Brer Rabbit this spring; don't let him eat your profits. Write Medical Service Corp., 130 N. Campbell Ave., Chicago 12, Ill. Dealer territories are available, and don't forget to mention AMERICAN VEGETABLE GROWER.

## A Broan Hood

We are building a grower house which we hope will help you in any building plans you might have. We have started this project because of the many letters from our readers asking for help. One of the first products we selected for the house was



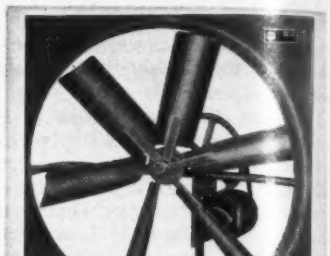
a Broan kitchen range hood and fan assembly. After looking over the units available, we were convinced that Broan equipment offered more value and quality than anything else on the market.

The Broan hood and twin blowers are of heavy gauge steel construction for rigidity and performance. All exposed seams are "Heliarc" welded to give the appearance of one-piece construction. The blower gives maximum air delivery with whisper-quiet operation. Push button controls are conveniently mounted on the front of the hood (built in and pre-wired), and the twin lights are concealed under the hood to eliminate glare. Of special interest to the housewife: the fan is easy to clean and disassembles in 30 seconds. Beveled corners allow full opening of adjacent cabinet doors. The hood comes in three finishes; white enamel, coppertone, and stainless steel, and in either modern or Colonial style.

If you are building this spring or summer be sure to get full details on Broan equipment, which includes kitchen range hoods, fans of all kinds, and electric heaters. Write O. H. Scheibe, Broan Mfg. Co., Hartford, Wis.

## Greenhouse Cooling

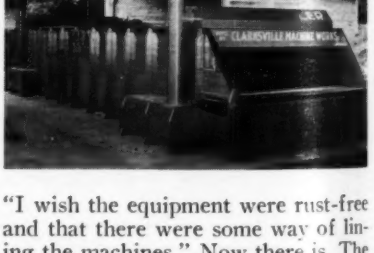
Two nights ago at a meeting several Cleveland greenhouse growers were talking about greenhouse cooling. Some of the big "glass" tomato



growers were quite interested in the new, grower-designed fan pictured above. The fans suck air through wet, fibrous pads and have cooled some greenhouses by as much as 30° during hot summer days. You should be aware of this new development, and if you will write Norman Augsburger, Acme Engineering and Manufacturing Corp., Muskogee, Okla., he will send their new pamphlet *Floral Breeze*, which describes the system.

## Glasslined Hydrocooler

Many growers have learned the advantages of hydrocooling in realizing higher quality and higher prices for their produce. Growers who own hydrocoolers have often said to me,



"I wish the equipment were rust-free and that there were some way of lining the machines." Now there is. The linings are made of Fiberglas, molten glass spun into threads and then woven into cloth. The glass cloth is then impregnated with a plastic resin and chemically bonded to the interior of all Clarksville Hydrocoolers. You will want full information on this new process. Write Jack M. Cline, Clarksville Machine Works, 1706 W. Cherry St., Clarksville, Ark.

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AMERICAN VEGETABLE GROWER

## IRRIGATION

(*Continued from page* 11)

tests at Geneva, for example, irrigation decreased the early yield but significantly increased the late and total yield of marketable fruit.

Blossom-end rot, or dry rot, of tomatoes can be almost completely controlled by proper irrigation, resulting in a profitable crop instead of a crop failure. In 1948, for example, irrigated tomatoes on the Mort Adams Farm at Sodus averaged only 0.2 fruit per plant showing blossom-end rot, as compared to 5 fruits per plant on nonirrigated plots. Similar results were obtained on the Fowler Bros. Farm at Walcott in 1949, and on plots at Geneva in 1954.

Many problems are encountered in vegetable irrigation. In the first place, too few systems have been designed by well-trained irrigation engineers. Usually the grower purchases a small system and then decides to enlarge it. The pump is too small, the pipe is too small, and too much power is lost in friction.

Sometimes knowledge of soil infiltration or water intake rates is inadequate so that the system applies water faster than the soil can absorb it. This results in loss of water from runoff and also in serious soil erosion.

Likewise, droplet size is often too large due to large sprinklers and/or low pressure. These large drops cause a severe impact when they hit the surface of the soil, causing breakdown of soil aggregates, sealing of pores on the surface, and reducing intake rates. These soils crust badly when they dry.

Wind seriously affects distribution patterns and best results are obtained by irrigating at night. Sprinkler spacing should be adjusted to give as uniform coverage as possible. This is particularly true when soluble fertilizer is applied through the irrigation system. These fertilizers will be applied as uniformly as is the irrigation water—no better, and no worse.

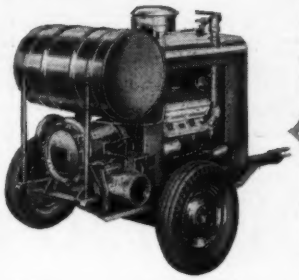
Once a grower purchases an irrigation system he will find many cases where he may use it for situations other than correction of soil water deficits:

1) Newly set transplants, such as pepper, tomato, celery, have injured root systems. Irrigation immediately after transplanting allows them to recover more rapidly, even though available water in the soil may be adequate for established plants. Jonas Haseley, of Sanborn, N.Y., says, "a sprinkle right after planting saves every celery plant."

2) Certain weed control chemicals may be applied to some crops

COMPARE *Irrigation* PUMPS!

WEIGH THESE POINTS BEFORE YOU BUY----



Available in many sizes. Air-cooled engines and water-cooled engines. G P M varies with lbs. pressure. Ratings from 80 GPM at 75 lbs. to 1250 GPM at 125 lbs., or 3000 GPM at 35-foot head.

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| 3' x 1000' | $15.90 | $14.88 | $14.37 | $13.95 |
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### HELP WANTED

WRITERS WANTED: FOR IMMEDIATE assignments. B.R., 5228 Irvine Avenue, North Hollywood, California.

SEED SALESMAN TO CALL ON THE market garden trade in the Mid West. Please give references, qualifications, etc. Our men know of this ad. Write Box 115, AMERICAN VEGETABLE GROWER, Willoughby, Ohio.

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through the irrigation system. Veeder Howard, of Albion, N.Y., obtained excellent control of weeds in his broccoli, cabbage, and cauliflower seedbed in 1958 by applying Vegadex (Monsanto Chemical Co.) through the sprinkler system.

3) Any soluble fertilizer, particularly nitrogen, may be easily applied through the sprinkler system. Here it is particularly important to have a uniform distribution pattern to insure uniform application of the fertilizer.

4) Frost control is easily obtained under certain conditions. Temperatures as low as 20° may be successfully combated by using small nozzles set to deliver a fine spray at about 1/10 of an inch per hour. Start sprinkling as soon as the temperature drops to 33° or 34° and keep it going until all of the ice has melted off the plants. This feature has been successfully used for late spring or early fall frosts on a wide range of sensitive plants. The DaPolito Brothers, Joe, John, and Mike, of Clyde, N.Y., figure that they paid for their entire irrigation system with the frost control it gave them shortly after they purchased it. The crop: 15 acres of strawberries.

5) Sprinklers are used in some areas, particularly muck, to keep the surface soil moist so it will not blow and cut off young seedlings.

Growers may expect excellent responses to irrigation in dry years if water is applied when it is needed by the crops and if all other production factors are optimum. In some years, of course, amount and distribution of rainfall are adequate for most crops, and in many cases some factor other than soil water limits yields. Grower judgment is extremely important in determining irrigation practices on his farm. Remember, the better the other production and cultural practices, the greater the response to irrigation. Many New York vegetable growers agree with Fred Faery, of Ransomville, who says, "If I could not irrigate, I would have been out of business long ago." THE END.

## GET YOUR COPY NOW!

COPIES of Results of 1958 Fungicide Tests are now available and may be obtained for $1.00 each from Dr. A. B. Groves, Department of Plant Pathology and Physiology, Winchester Fruit Research Laboratory, R. D. 3, Winchester, Va. All orders should include remittances made out to The American Phytopathological Society, which sponsored publication of the results. An added charge will be made for postage and handling where orders must be billed.

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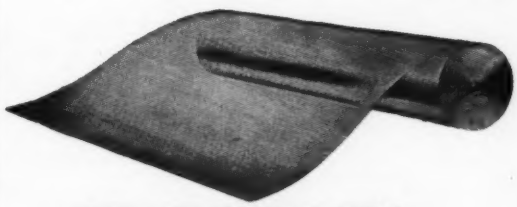

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## Let Freedom Prevail

THIS is open season on plans to solve the so-called "farm problem." Just in the past few days three different solutions were received in the mail. They ranged from socializing agriculture to a complete government hands-off policy.

The most insidious of the plans offered is compensatory payments. The idea is that farm commodities would be sold at free market level prices. The difference between the market price and a predetermined legislative price would be paid to the producer by the government.

It sounds simple and uncomplicated and as though it would eliminate many of the problems of the present program which has the government storing huge amounts of surpluses.

Actually what would happen with a compensatory payment program is that production would be increased because of the extra government payment received and the free market price would be driven down. The next step is a demand for strict production controls.

The secret to continued progress is the right to make your own decisions, take your own chances, and be flexible enough to change and adapt to new situations. A government program which has as its end result absolute conformity would soon stop progress by farmers.

## Bargaining Groups Mean Business

"UNITED we stand, divided we fall." This might well be the slogan of the times, because today's economic forces make organization a sensible answer to the question, "How can we survive and also make a profitable living?"

Interest in bargaining organizations is growing, growers are letting a group set the price for their crops, and both members and processors profit by orderly negotiations. It is no longer a haphazard, individual operation wherein the seller tries to get as much as possible and the buyer tries to pay as little as he can get away with. A stabilizing influence is exerted on the whole buying and selling structure.

When growers join a bargaining group, they have a moral as well as a business obligation to stick by their contracts. At times the grass may look greener on the other side of the fence and an individual grower may be tempted to violate his contract. This not only weakens the authority of the bargaining group, but lowers its prestige among buyers.

The court action levied by the California Tomato Growers Association against a grower-member who went off on his own to sell his 1959 crop shows that the associations mean business. What this association has done will presumably be done by others.

The moral is—stand back of your organization, and it will stand back of you.

## 'Greatest Change'

GROWERS throughout the country are being urged to keep a few simple records of their harvest, farm products sold, and major farm expenses in preparation for the regular five-year farm census next fall.

The facts gathered by census-takers will provide up-to-date information on "what promises to be the five-year period of the greatest change in U. S. agriculture," reports U. S. Bureau of the Census.

Enumerators will be local residents. They'll be looking for three kinds of information: farm resources, farm products produced and sold in 1959, and farming activities this year. They'll ask about farm acreages, persons working on the farm, types of equipment, harvest yields, number of days in off-farm work, as well as money spent for fertilizer, spray materials, labor, and the like.

None of the information will be available to any tax or investigative agency. Enumerators must also take an oath to keep the information confidential. About two weeks before the census, questionnaires will be mailed to rural boxholders. The completed questionnaires will be returned to the enumerators when they call.

VEGETABLE CONVENTION

"Fill 'er up!"

## Safety Makes Sense

HUMAN failure is the basic cause of farm accidents—not motor vehicles, farm implements or animals, but human failure to recognize a hazard. Hurry, lack of common sense, improper equipment, improper care and use of equipment, procrastination, false confidence, lack of knowledge—these are all human failures which claim some 3500 lives in farm work accidents each year.

These points are being highlighted as National Safety Council and USDA get set for the 16th annual National Farm Safety Week next month. "Safety Makes Sense" will keynote the theme of this year's campaign. And safety *does* make sense in fewer deaths, fewer injuries, less expense, less grief and suffering. About 12,000 farm residents lose their lives each year in all types of accidents.

Farm accidents can be prevented and National Farm Safety Week has played an important role in bringing about a reduction in the number of these mishaps.

How can growers help? By making regular safety inspections of their homes, buildings, fields, machinery, equipment, as well as work habits and attitudes. By realizing that dangerous shortcuts may in reality be a shortcut to death. By teaching each member of the family why safety makes sense, not only during National Farm Safety Week but all the time.

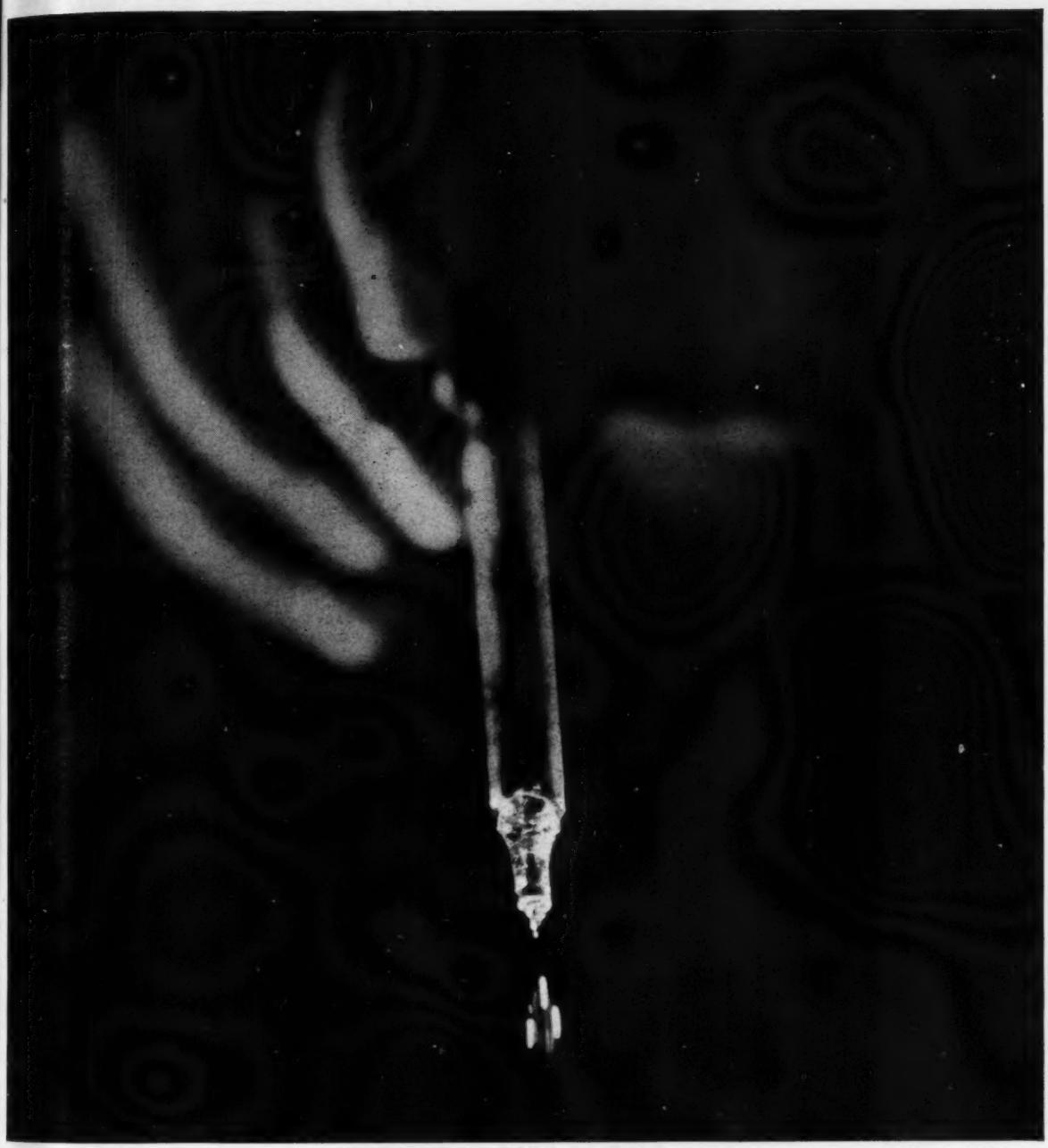
**QUOTE-OF-THE-MONTH**

**. . . 20 years from now we'll look back on 1958 and be a little amused that we were so fearful of the changes taking place today, rather than directing our energies toward channeling these changes down beneficial pathways.**

***—Howard Campbell***
***Nassau County (N.Y.) Agr'l Agent***

### Coming Next Month

- Buyer's Guide of Where to Buy Equipment and Supplies
- Vegetable Areas of America—ALASKA
- How the Ambrosino Brothers Get Quality and Quantity Crops of Peppers, Tomatoes, Eggplant



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Malathion gives fast, sure control of many other vegetable pests. In combination with Perthane, it offers effective, low cost control of resistant cabbage loopers. And, unlike most other phosphates, malathion can be handled safely *without* special clothing and respirator. The U.S. Public Health Service says, ". . . the toxicities of malathion (oral and through the skin) are less than those of DDT."

Send for Malathion Handbook, American Cyanamid Company, Agricultural Division, Dept. AV6, New York 20, New York.

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